प्रथम दयानन्द जन्म शताब्दि ग्रन्थमाला सं० ६

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आर्य्य-समाज

लेखक

श्री पं० गंगाप्रसाद उपाध्याय, एम. ए.

प्रकाशक

नारायण स्वामी, प्रधान,

दयानन्द जन्म शताब्दि सभा, मथुरा ।

प्रथम वार २००० } सम्वत १९८१ { मूल्य ॥)

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निवेदन

संसार का उद्धार करने के हेतु महर्षि दयानन्द का जन्म हुआ था। वे किसी एक देश या काल के व्यक्ति नहीं थे। प्राचीन-वैदिक-सिद्धान्तों के प्रसारण के हेतु ही आर्य्यसमाज की संस्थापना की गई थी। जगदोद्धारक ऋषि की एक मात्र यही अभिलाषा थी कि संसार सत्य का प्रेमी बने; मिथ्या, युक्ति-शून्य आडम्बरों का विनाश होकर मानव-जीवन पवित्र तथा शुद्ध हो। भारतवर्षान्तर्गत प्रचलित कुरीतियों तथा अज्ञानावृत सिद्धान्तों को देखकर दीनवत्सल दयानन्द का हृदय द्रवीभूत होगया था। उन्होंने यहां की धार्मिक, सामाजिक तथा दार्शनिक दशा के विषय में अपने जो सिद्धान्त निर्धारित किये हैं उनके प्रदर्शन के हेतु इस पुस्तक की रचना हुई है। महर्षि का अमूल्य जीवन स्वयं ही कितना शिक्षाप्रद है इसके विषय में कुछ भी कहना व्यर्थ है। हमें आशा है कि सत्याभिलाषी विवेकी व्यक्ति महर्षि के जीवन और उनके सिद्धान्तों से लाभ उठावेंगे।

आर्य्यसमाज ने अपने जीवन के इन पचास वर्षों में ही भारतवर्ष की जनता का दृष्टिकोण कितना परिवर्तित कर

दिया है, और इस छोटे से काल में देश का कितना उपकार किया है इसका वृत्तान्त भी इस पुस्तक में दिग्दर्शित किया गया है। आशा है कि हमारे पुरुषार्थी भाई आर्य्यसमाज के कार्य्य की सराहना करने के अतिरिक्त इसमें हाथ भी बटावेंगे। अभी यह महान् यज्ञ अपूर्ण है पर हमारे उद्योग से यह शीघ्र ही सफल हो सकता है।

अन्त में, हम अपने विद्वान् लेखक श्री पं० गंगाप्रसाद जी उपाध्याय एम. ए., को हृदय से धन्यवाद देते हैं जिन्होंने इस पुस्तक के रचने की कृपा की है।

नारायण स्वामी,

प्रधान,

प्रथम-दयानन्द-जन्म-शताब्दि-समिति, मथुरा।

विषय-सूची

विषय पृष्ठ

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प्रस्तावना

गत वर्ष मैंने यह विचार किया था कि 'आर्य्यसमाज' नामक एक पुस्तक रचूँ जिस में उसके पूज्य संस्थापक की जीवनी, सिद्धान्तों की विस्तृत व्याख्या, कार्य्यों का यथोचित वर्णन तथा विधर्मियोंकृत आक्षेपों के उत्तर और आर्य्यसमाज का संक्षिप्त इतिहास हो। यद्यपि इसके लिखने की सामग्री बहुत कुछ एकत्रित करली थी और प्रकाशन की सूचना भी दी जा चुकी थी तथापि शीघ्र ही अपने डेंगू-ज्वर में ग्रसित हो जाने और स्वास्थ्य बिगड़ जाने तथा प्रकाशन का प्रबन्ध न कर सकने के कारण पुस्तक निर्माण में भी शिथिलता हो गई। इस वर्ष पूज्यपाद श्री नारायण स्वामीजी ने इसी विषय पर एक छोटी सी पुस्तिका लिखने की आज्ञा दी। यह पुस्तिका उसी आज्ञापालन का उद्योग मात्र है। ऋषि की जीवनी के कुछ अध्याय बड़े ग्रन्थ के लिये लिखे गये थे कुछ में परिवर्त्तन कर दिया गया है। सिद्धान्त और कार्य्य सर्वथा नये सिरे से लिखे गये हैं, क्योंकि प्रस्तावित ग्रन्थ के अध्याय अधिक विस्तृत होने के कारण इस पुस्तिका के योग्य न थे। आशा है कि आर्य्यसमाज से अनभिज्ञ जनता को आर्य्यसमाज के सम्बन्ध में सारांश जानने में सहायता मिलेगी। बड़े ग्रन्थ के विषय में इस समय कुछ नहीं कहा जा सकता। उसका लिखना तो असम्भव नहीं है परन्तु जब तक प्रकाशन का प्रबन्ध नहीं होता पुस्तक लिखने का साहस करना कठिन है।

प्रयाग
संवत्, १९८१ वि०. } गंगाप्रसाद उपाध्याय एम. ए.

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आर्य्यसमाज

पहला भाग

संस्थापक और संस्थापना

पहला अध्याय

प्रकाश की पहली किरण।

पूरे सौ वर्ष हुये अर्थात् सम्वत् १८८१ विक्रमी (सन् १८२४ ई०) में गुजरात (काठियावाड़) देश के मोर्वी प्रान्त में उदीच्य ब्राह्मण कुल में एक बालक का जन्म हुआ। इस भौतिक सृष्टि में इस प्रकार के जन्म प्रतिक्षण हुआ ही करते हैं और इनके साथ कोई भी असाधारण बात नहीं होती। जीवन-आरम्भ प्रत्येक पुरुष का या यों कहिये कि प्रत्येक प्राणी का समान ही हुआ करता है। वही रोना, वही मातृ-दूध की इच्छा, वही निमेष, वही उन्मेष। परन्तु जिस प्रकार एक ही स्थान से अनेकों सड़कें, समानतया आरम्भ होकर

तत्पश्चात् एक दूसरे से [illegible] होती जाती है, इसी प्रकार प्राणियों की जीवन-यात्रा [illegible]धि उनमें विशेषता और भेद उत्पन्न कर देती है। राजा और रंक, देव, ऋषि और मनुष्य, उत्पन्न होने के समय प्रायः एक से ही होते हैं। गर्भ के आरम्भ में तो पशु, पक्षी, कीट, पतङ्ग की भी वही अवस्था होती है जो मनुष्य की। परन्तु ज्यों ज्यों समय व्यतीत होता जाता है और शरीर अभिवृद्धि को प्राप्त होता जाता है त्यों त्यों भिन्न २ शरीरावयवों का भेद प्रकाशित होने लगता है और जन्म के समय भेड़ और मनुष्य के बच्चों में इतना भेद हो जाता है कि साधारण दृष्टि भी उसमें धोखा नहीं खा सकती। जन्म के समय मनुष्य मात्र के बच्चे एक से होते हैं। किसी के मस्तिष्क पर यह खुदा नहीं होता कि यह ऋषि है अथवा यह राजा है। यह मूर्ख है अथवा यह दरिद्र है। यह देश-भक्त है या यह देशशत्रु है। परन्तु, थोड़े ही दिनों पश्चात् इन बच्चों की गुप्त शक्तियां प्रादुर्भूत होने लगती हैं और उन में पूरब और पच्छिम का भेद हो जाता है। प्राचीन यूनानियों ने मनुष्यों को दो कोटियों में विभक्त किया है एक पार्थिव (men of clay), दूसरे आग्नेय (men of fire)। पार्थिव मनुष्य वह हैं जिनका उद्देश्य केवल खाना पीना और सुख भोगना है। वह लौकी या कुम्हड़े के समान पृथ्वी के सहारे रहते और पृथ्वी पर ही मुरझा जाते हैं। इनका समस्त जीवन दूसरों के आश्रय व्यतीत

होता है। वह किसी को [illegible] नहीं दे सकते। उनकी छाया में किसी को सुख [illegible] मिलता। परन्तु आग्नेय मनुष्यों की चाल ही निराली है। वह संसार में सुख भोगने नहीं आते किन्तु दूसरों को सुख देने आते हैं। यह अग्नि की ज्वाला के समान ऊपर को चलते हैं। उनकी गति उर्द्ध होती है। वह दूसरों का आश्रय ढूंढ़ने के स्थान में दूसरों को आश्रय देते हैं। उनकी छाया में संसार पलता है और उनके तेजोमय जीवन से निस्तेज प्राणी भी तेज ग्रहण करते हैं। पार्थिव मनुष्यों से पृथ्वी भरी पड़ी है। उनके जीवन चरित्र लिखने के लिये लेखकों को कष्ट उठाना नहीं पड़ता, मुद्रणालयों में कम्पोज़ीटरों को परिश्रम नहीं करना पड़ता, पाठकों को पढ़ने की आवश्यकता नहीं होती। "आहार, निद्रा, भयमैथुनंच" ही उनका आद्योपान्त इतिहास है, यही उनका जीवन चरित्र है। आग्नेय मनुष्य कभी २ ही उत्पन्न होते हैं परन्तु उनका प्रभाव संसार के प्रत्येक विभाग में पाया जाता है। उनका भौतिक जीवन तो बहुत बड़ा नहीं होता। परन्तु उनके शरीरान्त के साथ उनकी मृत्यु नहीं होती। उनके जीवन उनकी संस्थायें हैं जो उनके प्राणान्त के सहस्रों वर्ष पश्चात् तक दृष्ट तथा अदृष्ट रूप में उपस्थित रहती हैं। ऐसे आग्नेय पुरुष ही चिरस्मरणीय होते हैं और इनका जीवन चरित्र योग्य पुरुष न केवल काग़ज़ के पृष्ठों पर ही किन्तु अपने हृदय-पटल पर भी लिखने का यत्न करते हैं। जिस छोटे बालक के जन्म

का संकेत हमने ऊपर किया है वह उन्हीं आग्नेय पुरुषों में से था।

जिस प्रकार बड़े वृक्षों की जड़ें सर्वथा भूमि के भीतर ही रहती हैं इसी प्रकार महान् पुरुषों के प्रारम्भिक वृत्तान्त भी समयरूपी भूमि के भीतर ही छिपे रहते हैं। उस समय उनके सहयोगियों को उनकी महत्ता का पता भी नहीं होता। इसीलिये उनका उस समय का इतिहास यथोचित प्रकाश नहीं पाता। बहुधा देखा जाता है कि जब इस प्रकार के मनुष्य अपने तपोबल तथा पराक्रम के कारण ख्याति प्राप्त कर लेते हैं तो उनके अनुगामी लोग उनके जन्मकाल, जन्म स्थान, तथा जन्म के साथ अनेकों अविश्वसनीय और असम्भव घटनायें जोड़ कर उनको करामाती बना देते हैं और जो काम उन्होंने अपने जीवनसमय में लक्ष्य में रक्खा था वह उनके अन्ध विश्वासी तथा गुरु-कीर्त्ति-प्रिय शिष्यों द्वारा नष्ट भ्रष्ट हो जाता है। महात्मा बुद्ध, मुहम्मद साहब, ईसा मसीह के विषय में हम इस प्रकार बहुत सी गप्प कथाओं को प्रचलित पाते हैं, और साधारण जनता में यह कथायें मूल-सिद्धान्तों की अपेक्षा सौ गुनी अधिक प्रिय हो जाती हैं। कोई कहता है कि अमुक महापुरुष के जन्म के समय अमुक तारा निकला, कोई कहता है कि अमुक पुरुष के जन्म समय अमुक आकाश वाणी हुई। अमुक पुरुष जन्मते ही इस प्रकार उठ खड़ा हुआ या अमुक बात कहने लगा।

सम्भव है कि किसी समय ऐसी लोकोक्तियाँ इस बालक के विषय में भी प्रचलित हो जांय और हमारी तुच्छ बुद्धि में तो यदि ऐसा हुआ तो बड़े ही दुर्भाग्य की बात होगी। परन्तु इस समय इस बालक के बालपन के विषय में ऐतिहासिक खोज के उपरान्त भी बहुत ही कम ज्ञात हो सका है। समस्त बाल्यावस्था सम्बन्धी सूचना का मूलाधार इस महापुरुष का स्व-कथित वृत्त ही है। इतना तो निश्चय है कि गुजरात का मौर्वी प्रान्त ही जन्मस्थान है। सम्भव है मौर्वी नगर हो, सम्भव है उसी के अन्तर्गत टङ्कारा ग्राम हो। पितृ दत्त नाम था मूलशङ्कर। पिता-माता के धार्मिक् विचारों को देखते हुये यह नाम सर्वथा उचित था क्योंकि पिता अम्बाशङ्कर जी शैव मतानुयायी और शङ्कर के विशेष भक्त थे। सम्भव है कि कई पीढ़ियों से यह भक्ति की परम्परा इस कुल में चली आई हो क्योंकि 'अम्बाशङ्कर' महादेव और पार्वती दोनों के नामों का स्मारक है। 'मूलशङ्कर' भी शिव की अगाध भक्ति का प्रदर्शक है। श्रीयुत देवेन्द्रनाथ मुखोपाध्याय के कथनानुसार "दयानन्द के पिता एक विशिष्ट शिवोपासक थे। यहां तक कि वह शिवोपासना को ही सार सर्वोच्चधर्म समझते थे। फलतः विपुल सम्पत्ति और विस्तृत परिवार के स्वामी होने पर भी वह धर्म विषय में जैसे निष्ठासम्पन्न थे, वैसे निष्ठासम्पन्न लोग संसार में बहुत न्यून देखने में आते हैं। इसी हेतु शङ्कर के उद्देश से वारव्रत, अर्चना उपवास जो कुछ अनुष्ठितव्य था

वह उस सब को ही सर्वाङ्ग रूप से अनुष्ठित करके चलते थे। केवल आपही नहीं चलते थे उसके लिये दूसरों को भी अनुरोध करते थे। जिस स्थान में शिव पुराण का पाठ होता, जहां शिवोपाख्यान सुनाया जाता, किंवा जिस स्थान में शिव सम्बन्धी किसी सदुनुष्ठान की सूचना होती, वह उस स्थान में श्रद्धान्वित चित्त से जाकर उसका श्रवण और दर्शन करके अत्यन्त पुलकित होते थे। फिर इस में क्या संशय है कि पितृ-प्रकृति की ऐसी प्रगाढ़ और अकृत्रिम धर्मनिष्ठा पुत्र दयानन्द में भी निवेशित हो गई। केवल अकृत्रिम-धर्मनिष्ठा के कारण ही वे प्रसिद्ध नहीं थे। वह एक अविचलित चित्त व्यक्ति भी थे"।

पं० अम्बाशंकर जी संस्कृत विद्या-प्रिय थे। उनके घराने में वेदपाठ बहुत होता था। यही कारण था कि उन्होंने अपने पुत्र मूलशङ्कर को भी वेदपाठ कराया था। पांच वर्ष की अवस्था से पूर्व ही में मूलशंकर ने अक्षर-बोध प्राप्त कर लिया और अनेकों वेद मंत्र उनको याद हो गये। आठवें वर्ष उनका जनेऊ (यज्ञोपवीत संस्कार) हुआ और वह नियमानुसार वेद पढ़ने लगे। १४ वर्ष की अवस्था तक वे व्याकरण और सम्पूर्ण यजुर्वेद पढ़ चुके थे।

पं० अम्बाशङ्कर जी की यह इच्छा थी कि हमारा पुत्र भी हमारे समान शिव का भक्त बने। इसलिये उनका सर्वदा यही अनुरोध रहा करता था कि मूलशङ्कर को नियमानुसार शिव

पूजन, शिव-व्रत तथा शिव-कथा श्रवण का अभ्यास कराना चाहिये। मूलशङ्कर की माता बड़ी स्नेहमयी तथा कोमल-हृदया थीं। जब पिता व्रत आदि के लिये आग्रह करते तो माता यह कह कर टाल दिया करतीं थीं कि अभी बालक है ऐसा कठोर व्रत पालन नहीं कर सकता।

फाल्गुन मास के पहले पक्ष में त्रयोदशी को शिवरात्रि का त्योहार होता है। उस दिन शिव के भक्त व्रत रखते हैं और रात भर जागरण करके शिवजी की पूजा में व्यतीत करते हैं, पं० अम्बाशङ्कर ने मूलशङ्कर को कई बार व्रत रखने के लिये अनुरोध किया और जब वह चौदह वर्ष के हुये तो व्रत रखने पर राज़ी हो गये। मूलशङ्कर थे तो छोटे परन्तु आरम्भ से ही उनके हृदय में ईश्वर की भक्ति थी। वे समझते थे कि ईश्वर कोई ऐसी अच्छी वस्तु है जिसके प्राप्त होने से बड़ा आनन्द मिलता है। इसलिये उन्होंने बड़ी श्रद्धा से व्रत रक्खा और दिन भर बिना आहार तथा जल पान के व्यतीत किया। इस प्रकार के व्रत तो सदा ही रक्खे जाते हैं और उनमें भक्ति भी होती है। हम देखते हैं कि लाखों मनुष्य भिन्न २ अवसरों पर उपवास करते हैं और उनको यही आशा होती है कि हम को इसका कोई अच्छा फल ईश्वर की ओर से मिलेगा। परन्तु यदि उपवास रखने वालों के विचारों की मीमांसा की जाय, यदि वे स्वयं अपने हृदयों को टटोलें तो ज्ञात होगा कि उनका लक्ष्य कुछ अनिश्चित सा होता है। जिस प्रकार कोई मनुष्य

सूचीभेद्य अंधेरे में कुछ टटोल रहा हो वही दशा इन लोगों की होती है। वस्तुतः उनको नहीं मालूम कि हमको क्या मिलेगा और क्यों कर मिलेगा और कौन उसे देगा। यही अवस्था स्वर्ग-इच्छा और मुक्ति-इच्छा की है। हम इतना तो जानते हैं कि यह कोई प्राप्ति के योग्य वस्तुएं हैं जिनका मिलना सम्भव है। जो स्वयं अच्छी भी हैं। जिनसे सुख मिलेगा। परन्तु वस्तुतः वह क्या वस्तुएं हैं? उनका स्वरूप क्या है? उसका आनन्द कैसे मिलता है? यह सब बातें स्पष्टतया साधारण मनुष्य के मस्तिष्क में नहीं होतीं।

मूलशङ्कर में और इन साधारण मनुष्यों में कुछ तो समानता थी परन्तु कुछ भेद भी था। सभी बड़े मनुष्य छोटे लोगों से किसी न किसी पक्ष में समान होते हैं और विशेषता भी होती ही है। समानता तो यह थी कि मूलशङ्कर ने भी अन्य लोगों की भांति अच्छा और प्राप्ति-योग्य समझ कर ही उपवास रक्खा। उन्होंने समझा कि ऐसा करना हमारे लिये कल्याणकारी होगा। परन्तु आने वाली घटना से पता चलता है कि उनका अधिक विचार भौतिक सुख की अपेक्षा ईश्वर-प्राप्ति पर था। वह यह समझते थे कि ऐसा करने से ईश्वर हम से प्रसन्न होगा और आज हमको शिव के साक्षात् दर्शन मिलेंगे। उन्होंने अन्य लोगों के समान न तो ईश्वर के स्वरूप का ही विचार किया था और न यही जानते थे कि ईश्वर की प्राप्ति से क्या आनन्द होता है। केवल अनिश्चित विचार ही

उनके मस्तिष्क में भरे थे। वह समझते थे कि ईश्वर कोई ऐसी चीज़ है जिसकी प्राप्ति मनुष्य के लिये आवश्यक है।

पाठक गण, यदि तुमको कभी अपने विचारों की वक्रगति की मीमांसा करने का अवसर मिला हो तो तुम जानते होगे कि कभी कभी मनुष्य के हृदय में प्रेम की लहर उत्पन्न होती है और यह पता नहीं लगता कि उस प्रेम का विषय क्या है। हमको प्रतीत होता है कि हमारा हृदय हमको छोड़ कर किसी वस्तु की ओर जा रहा है। परन्तु उसकी गति के लक्ष्य का पता नहीं। यह तो जानते हैं कि हम किसी को प्यार करते हैं परन्तु किस को प्यार करते हैं यह पता नहीं। ऐसा अनिश्चित-विषयिक प्रेम बहुधा हमारे हृदयों में उठा करता है। इस अवस्था को एक प्रकार की अकथनीय, अनिर्वचनीय अवस्था कह सकते हैं। यह अवस्था न तो शब्दों में प्रकाशित की जा सकती है और न तर्क इसके विषय में कुछ अनुसन्धान कर सकता है।

मूलशङ्कर की उस शिवरात्रि के दिन वही अवस्था थी। उनका आत्मा किसी महती शक्ति की ओर प्रधावित सा हो रहा था। लक्ष्य निश्चित न था। सामने अंधेरा सा प्रतीत होता था। वह इसीलिये अपने कर्त्तव्य में लवलीन थे कि ईश्वर के दर्शन होंगे। ईश्वर क्या है और कैसा है? इसका उनको क्या पता? परन्तु अन्य पुरुषों की भांति उन्होंने अपने मस्तिष्क को विचार-शून्य नहीं कर दिया था। उनका प्रेम और उनकी बुद्धि

दोनों ही ईश्वर के अर्पण थे। वह ईश्वर के अधूरे भक्त होना नहीं चाहते थे। वह अपने सर्वस्व को ही जगत्पिता की भेट करना चाहते थे। उनके आगामी जीवन से पता चलता है कि उन्होंने अन्ध विश्वास को कभी अपने हृदय में स्थान नहीं दिया। वह अन्ध विश्वास युक्त भक्ति को अधूरी भक्ति कहते थे। यही उन में और साधारण मनुष्यों में भेद था और यह भेद बहुत बड़ा भेद है।

शिवरात्रि को दिन भर उपवास रखने के पश्चात् जब रात्रि आई तो १४ वर्ष के मूलशङ्कर ने जागरण की तैय्यारी की और अपने पिता के साथ शिव-कथा श्रवण करने के लिये शिवालय में जा उपस्थित हुये। उनके पिता को प्रति वर्ष यही करते करते स्वभाव सा हो गया था। वह जब शिवरात्रि आती, जागरण करते और जब चली जाती तो अपना काम काज देखते। यही हाल कथा कहने वाले पुजारी का था। परन्तु मूलशङ्कर को यह पहली ही रात्रि थी। जिस मार्ग का उन्होंने आज अवलम्बन किया था वह उनके लिये कोई परिचित मार्ग न था, इसलिये वह चौकन्ने होकर चल रहे थे। बाल्योचित औत्सुक्य भी उनमें उपस्थित था। वह समझते थे कि शिव-कथा सुनकर जीवन सफल करेंगे और ईश्वर के दर्शन करके तृप्ति ग्रहण करेंगे। हम को ज्ञात नहीं कि उन्होंने क्या कथा सुनी और उसने उनके आत्मा पर क्या प्रभाव डाला। परन्तु अनुमान होता है कि उन्होंने

कैलाशवासी शिवजी, उनकी अर्द्धाङ्गिनी पार्वती जी, तथा उनके वाहन वृषभ के विषय में बहुत कुछ सुना होगा। उनको बतलाया गया होगा कि जिस समय शिवजी डमरू बजाकर अपना तांडव नृत्य करते हैं तो संसार में हलचल मच जाती है। सृष्टि के संहार करने वाले यही हैं। इन्हीं की महती शक्ति है। इन्हीं को देवों का देव महादेव कहते हैं, इत्यादि इत्यादि। कुछ भी हो इसमें सन्देह नहीं कि बालक मूलशङ्कर सम्पूर्ण उद्योग से दत्तचित्त होकर शिव-कथा का अमृतपान करते रहे और कथा कहने वाले के शब्दों पर यथा शक्ति विचार भी करते रहे। कहते हैं कि ज्यों ज्यों रात्रि व्यतीत होती गई निद्रा देवी का उपासकों के ऊपर आक्रमण भी बढ़ता ही गया। निद्रा रात्रि की रानी है। वह तो अपना कर राजा और रंक सभी से लेती है। और जो उस कर को नहीं देता वह विद्रोह के लिये दण्ड भी अवश्य पाता है। कुछ उपासक तो पहर रात गये हीं ऊँघने लगे कुछ ने अधिक वीरता दिखाई और यद्यपि कानों ने सुनी अनसुनी करनी शुरू की, तो भी भक्ति और श्रद्धा से प्रेरित होकर 'हूँ' 'हाँ' करते रहे। परन्तु जब आधी रात निकट आई तो श्रोतृ गण तो एक ओर रहे स्वयं कथा कहने वाले पण्डित जी भी निद्रा देवी के तीव्र प्रहारों का सहन न कर सके और अति शीघ्र लोट पोट हो गये। उस समय एक माई का लाल, चौदह वर्ष का मूलशङ्कर ही जागता था। "या निशा

सर्वभूतानां तत्र जागर्ति संयमी"। मूलशङ्कर सच्चे संयमी थे। उनके हृदय में उमङ्ग थी, वह ईश्वर दर्शन के लिये उत्सुक थे। अतः उनको नींद आनी ही कठिन थी।

जिस समय मूलशङ्कर इस असमंजस की अवस्था में अकेले उस मन्दिर में जाग रहे थे। यकायक एक घटना हुई जो यद्यपि साधारण मनुष्यों के लिये साधारण सी घटना है तथापि मूलशङ्कर के लिये यह एक जीवन पलटने वाली घटना थी। घटना यह थी कि एक छोटा चूहा आया और सामने स्थापित की हुई शिव की मूर्ति पर से चढ़ावा उठाकर ले गया। ऐसी घटनायें मूर्ति-पूजक संसार के सन्मुख नित्य प्रति होती रहती हैं। भारत के प्रत्येक नगर वा ग्राम में मार्गों पर पाषाण मूर्तियां होती हैं जिनके चढ़ावे का अधिकांश केवल कुत्ते बिल्लियों के ही भाग में आता है। परन्तु इसमें किसी मनुष्य को कोई असाधारण बात प्रतीत नहीं होती। हो क्यों? उनका लक्ष्य तो अनिश्चित होता है जैसा कि हम ऊपर लिख चुके हैं। उन्होंने अपने विचारों का कभी विश्लेषण करने का प्रयत्न नहीं किया। उन्होंने कभी यह जांच नहीं की कि हमारे विचार वस्तुतः क्या हैं? वह तो उस पुरुष के समान हैं जो जंगल के बीच में दौड़ रहा है परन्तु नहीं जानता कि मैं कहां जाऊंगा॥ इसीलिये संसार की अनेक घटनायें उनके हृदय-पटल पर कोई चिह्न नहीं बनातीं और न उन के मस्तिष्कों को कष्ट देती हैं। जिस प्रकार कागज़ नहीं

जानता कि उस पर क्या लिखा जा रहा है, जिस प्रकार लेखनी नहीं जानती कि मुझसे क्या लिखा जा रहा है जिस प्रकार कमरे की दीवारें नहीं जानतीं कि क्या लिखा जा रहा है। इसी प्रकार साधारण हृदय भी इन घटनाओं से प्रभावित नहीं होते। परन्तु मूलशङ्कर का हृदय-पटल स्वच्छ दर्पण के सदृश था। उसमें छोटी से छोटी घटना भी अपनी प्रतिच्छाया डाले बिना नहीं रह सकती थी। अतः चुहिया ने मूलशङ्कर के हृदय में एक विचित्र उथल पथल उत्पन्न करदी। श्रीयुत देवेन्द्रनाथ मुखोपाध्याय के शब्दों में "उस घटना ने बुद्ध के शव दर्शन की न्याईं, लूथर के बाइबिल पाठ की न्याईं, और चैतन्य के साथ ईश्वरपुरी के साक्षात् की न्याईं दयानन्द के सामने नये प्रदेश को उद्घाटित कर दिया"।

वह सोचने लगे कि "मेरे पुरोवर्त्ती वृषवाहन पुरुष, जिनके विषय में शास्त्र कहता है कि विचरण करते हैं, भोजन करते हैं, सोते हैं, पीते हैं, हाथ में त्रिशूल धारण कर सकते हैं, डमरू बजाते हैं और मनुष्य को अभिशाप प्रदान करते हैं। क्या वह यही महादेव हैं" जिनके ऊपर से चूहे चढ़ावा उठा ले जाते हैं। जो अपने गात्र की भी रक्षा नहीं कर सकता वह सर्व शक्तिमान कैसे हो सकता है? जिसको चूहा भी नहीं डरता वह सृष्टि का संहार किस शक्ति से करता होगा? यह विचार-शृङ्खला मूलशङ्कर के मस्तिष्क में उद्वेग उत्पन्न करने लगी। यह वस्तुतः प्रकाश की पहली किरण थी जो उस

विचार रूपी अंधकार में चमकने लगी। यह पहला अवसर था जब मूलशङ्कर ने यह जानने का यत्न किया कि जिस ईश्वर की प्राप्ति के लिये इतना कष्ट उठाया जा रहा है और इतना ढोंग रचा जा रहा है वह वस्तुतः क्या है ? यह एक चौदह वर्ष के बालक के मस्तिष्क का पहला प्रश्न था और इसी प्रश्न के उत्तर पर ज्ञान के समस्त कोष की आधार शिला थी, सम्भव है कि यह प्रश्न अनेकों मस्तिष्कों में उठते हों और जिस प्रकार जलती हुई आग पर लकड़ी न रखने से बुझ जाती है इसी प्रकार परिस्थिति अनुकूल न होने से जिज्ञासा की अग्नि भी बुझ जाती हो। परन्तु मूलशङ्कर ने इस अग्नि को जीवन पर्य्यन्त देदीप्यमान रक्खा और वह न केवल उसी एक आत्मा को किन्तु अनेकों तमो-पीड़ित प्राणियों को प्रकाश और शान्ति पहुंचा सकी।

दूसरा अध्याय

वैराग्य तथा गृह-त्याग

चूहे के मूर्ति पर चढ़ जाने से मूलशंकर के मन में जो भाव-तरङ्ग उठ खड़ी हुई वह उन्हीं तक परिमित न रह सकीं। वह बड़ी प्रबल तरङ्ग थी और उनके संकुचित शरीर की संकुचित सीमा को उल्लङ्घन किये विना नहीं रह सकती

थी। पाठकों ने गंगा की प्रबल धारा को किनारे काटते देखा होगा। इसी प्रकार मूलशंकर का हाल हुआ उन्होंने तुरन्त ही अपने पिता जी को जगाया और अपनी शङ्का उपस्थित की। परन्तु पिता जी क्या उत्तर देते? वह लगे डाटने। सामान्य पिता अपने पुत्रों की शंकाओं का इसी प्रकार समाधान किया करते हैं, और बुद्धि विकसित कलिका को सदा के लिये मुरझा देते हैं। पं० अम्बाशङ्कर ने भी यही किया। परन्तु उनको यह ज्ञात न था कि जो बालक आज उनके पुत्र रूप में सामने बैठा हुआ है वह एक महान् आत्मा ईश्वर का भेजा हुआ संसार को दुःख से छुड़ाने के लिये ही संसार में आया है।

पिता की डाँट पड़ते ही मूलशङ्कर चुप हो गये। उनके मन में विश्वास हो गया कि पिता जी शङ्का को निवारण नहीं कर सकते। इस भाव ने शङ्का की अग्नि को और प्रज्वलित कर दिया। मूलशङ्कर की दृढ़कार्यता इसी बात से स्पष्ट है कि जब तक वह पाषाण मूर्ति को शिव समझते रहे उन्होंने अपनी समस्त शक्ति और अनन्य भक्ति से उसकी अर्चना की और उपवास आदि के कष्ट उठाये, परन्तु ज्योंही उनको इस के शिव होने में शंका हुई उनकी श्रद्धा भी जाती रही। वह सोचने लगे कि जिसके लिये इतने कष्ट उठाये जायं उसके ईश्वर होने में ही यदि संदेह है तो हमारा समस्त उद्योग ही निष्फल हो गया। वह तुरन्त ही मन्दिर को छोड़कर घर चल

दिये। और वहां जाते ही माता से खाना मांगकर खा लिया। वह अपने उद्योग को असत्य लक्ष्य के लिये गंवाना नहीं चाहते थे। वह सत्य व्रत को ही व्रत समझते थे और सब को पाखण्ड बताया करते थे। इसी बात का उन्होंने जीवन पर्य्यंत उपदेश किया। उनके लिये

"नहि सत्यात्परो धर्मः"

सत्य से अधिक कोई धर्म न था और सत्य को सामने रख-कर वह हर एक बात की उपेक्षा कर सकते थे। वह धर्म के वाह्य रूप की अपेक्षा धर्म के तत्व को अच्छा समझते थे। परन्तु उनके पिता की चाल साधारण मनुष्यों जैसी थी। उनके लिये वाह्यरूप ही धर्म का सर्वस्व था। इसलिये उन्होंने प्रथम तो डाट को ही शङ्का का बहुत अच्छा समाधान समझा। पश्चात् जब उनको अपने पुत्र के व्रत-भङ्ग की वार्त्ता ज्ञात हुई तो वह और भी अधिक क्रुद्ध हुये, परन्तु अब हो ही क्या सकता था? तीर कमान से छूट चुका था। और सब के लिये तो बात वहां की वहीं रह गई। परन्तु मूलशङ्कर के मन के भीतर उसका प्रभाव बढ़ता ही गया।

प्रतीत होता है कि इस घटना के पश्चात् मूलशङ्कर का संसर्ग अधिकतर उनके चचा के साथ रहा। सम्भव है कि कट्टर शैव होने के कारण पिता अम्बाशङ्कर ने अपने संदेह-मय पुत्र से सहानुभूति प्रकट करनी कम करदी हो। उनके अपने बताये हुये जीवन चरित्र से ज्ञात होता है कि उनके

चचा उनसे हित करते और उनके पठन-पाठन में योग देते थे। अध्ययन सामान्यतया ज़ारी रहा। तीक्ष्ण-बुद्धि मूलशङ्कर ने शीघ्र ही उपस्थित साधनों से अधिक से अधिक लाभ उठाया और पठन-पाठन में दत्तचित्त रहे। परन्तु वह लकीर के फ़क़ीर न थे। जो पढ़ते थे उसका तद्वत् मान लेना उनको अभीष्ट न था। मनन करना और बात के तत्व को खोजना उनका स्वभाव था। उनका कुल सामवेदी था परन्तु उनको यजुर्वेद पढ़ाया गया था इसका उल्लेख हम ऊपर कर चुके हैं।

अब एक घटना और हुई जिसने उनके आत्मा को अधिक परिष्कृत कर दिया। महात्मा बुद्ध को मृत्युदेव ने ही घर त्यागने की शिक्षा थी, और मूलशङ्कर के जीवन में भी इसी प्रकार की घटना ने परिवर्त्तन किया। थोड़े काल के अन्तर से उनके चाचा और बहिन की मृत्यु हो गई। उन्होंने अपने दो आत्मीयों को इस संसार से कूच करते देखा। वह यह समझ न सके कि यह लोग देह को छोड़कर कहां चले गये। जहां पहले उनके हृदय में यह प्रश्न उठा था कि ईश्वर का वास्तविक स्वरूप क्या है वहां अब उनके हृदय में उसी से घनिष्ट सम्बन्ध रखनेवाला दूसरा प्रश्न उपस्थित हुआ कि मनुष्य जीवन क्या है? जन्म क्या है? मृत्यु क्या है? मनुष्य कहां से आता है और कहां चला जाता है? ये प्रश्न साधारणतया सभी के मन में उत्पन्न होते हैं। सभी नित्यप्रति

लोगों को पैदा होते और मरते देखते हैं परन्तु उनको यह प्रश्न व्यावहारिक प्रतीत नहीं होते। हम सदैव उन्हीं प्रश्नों पर अधिक विचार करते हैं जिनका हमारे विचार में जीवन से घनिष्ट सम्बन्ध है। अन्य प्रश्न उठते तो हैं परन्तु अनावश्यक समझकर त्याग दिये जाते हैं। परन्तु मूलशङ्कर के लिये यह प्रश्न उनके जीवन का प्रश्न होगया। वह समझने लगे कि जीवन के आगामी कार्य्य-क्रम को निर्धारित करने के लिये इस प्रश्न के समाधान करने की परमावश्यकता है। और वह गुरुजनों से इसके विषय में बात चीत करने लगे। जहां उनको पता लगा कि अमुक पण्डित योग्य है वहीं जाते और पूछते कि मौत क्या चीज़ है? यदि कोई योगी अपने निवासस्थान के निकट आता तो उसी के पास जाकर अपनी शङ्का को दूर करना चाहते। इस प्रकार कई वर्ष इसी खोज में व्यतीत हुये परन्तु संतप्त हृदय को शान्ति न मिली। यह वस्तुतः प्रकाश की दूसरी किरण थी जो एक उत्सुक हृदय को प्रकाश-पुंज की ओर निमन्त्रित कर रही थी।

काशी संस्कृत विद्या का केन्द्र है। वहां गये बिना विद्या का अध्ययन पूर्ण नहीं हो सकता, ऐसा विश्वास भारतवासियों के हृदयों में सहस्रों वर्ष से चला आता है। मूलशङ्कर ने काशी जाने का विचार किया। उनको आशा थी कि काशी में उनके मनोरथ सफल हो जायंगे। परन्तु मा बाप के प्रेम ने उनको ऐसा करने की आज्ञा न दी। उनको भय हो गया था कि कहीं

उनका लड़का हाथ से न छिन जाय। अतएव घरवालों ने निकटवर्त्ती एक विद्वान परिडत के समीप पढ़ने का प्रबन्ध कर दिया। परिडत जी थे तो विद्वान परन्तु सांसारिक होने के कारण वह अपने शिष्य की अभ्यान्तरिक इच्छाओं की पूर्त्ति करने में असमर्थ थे। शिष्य को व्याकरण की शुष्क पंक्तियों से ही प्रयोजन न था। वह आत्मदर्शन के प्यासे थे। उन्होंने एक दिन स्पष्टतया अपने अध्यापक से कह दिया कि मुझे एक अध्यात्म-गुरु चाहिये और उसी की खोज में मुझे घर छोड़ना है। अध्यापक महाशय ने अपना कर्त्तव्य समझा कि इस गुप्त रहस्य को मूलशङ्कर के माता-पिता के सम्मुख प्रकट करदें जिससे उनकी सांसारिक ख्याति में बाधा न आवे।

अब तो गुरु-जनों को भली प्रकार विदित हो गयो कि मूलशङ्कर एक न एक दिन घर से अवश्य चल देगा। इस रोग का भारतवर्ष में एक ही उपाय समझा जाता है। अर्थात् दुपाये से चौपाया बना दिया जाय। वस्तुतः विवाह और गृहस्थाश्रम ऐसे बन्धन हैं जिन से छुटकारा होना प्रायः असम्भव ही है। जिस प्रकार रेशम का कीड़ा अपने भीतर से धागा निकाल कर अपने चारों ओर ताना बाना पूरता है और अपने लिये एक कुकून बनाता है जिसमें उसकी मृत्यु हो जाती है, इसी प्रकार मनुष्य विवाह संस्कार रूपी कुकून अपने लिये तैय्यार

करता है। विवाह हुआ, बाल बच्चे हुये, सम्पत्ति आई, सारांश यह कि शनैः २ खोल की दीवारें अधिक जटिल और सुदृढ़ होती जाती हैं और अन्त को इन्हीं के मध्य में मनुष्य का प्राणान्त हो जाता है। एक बार इस प्रकार का कुकून बनाने वाले कभी इस बन्दीगृह से मुक्त नहीं हो सकते। यह दृढ़तम क़ैदखाना है जिसकी दीवारों को क़ैदी स्वयं ही मज़बूत करता चला जाता है और जेलर को उसकी देख भाल की भी आवश्यकता नहीं होती।

पं० अम्बाशंकर और उनकी कोमल हृदया अर्द्धाङ्गिनी ने अपने पुत्र के लिये यही बन्दीगृह निश्चित किया और इसके निर्माण के लिये बड़े समारोह से तैय्यारियां होने लगीं। युवा मूलशंकर ने इस बात को सुना और अपनी मनोरथ सिद्धि में बाधक समझा। इस अवस्था के साधारण लड़के तो इस अवसर को अपने जीवन का सब से मधुर अंश समझते हैं। परन्तु इन के सन्मुख सुख भोग के सिवाय कोई अन्य लक्ष्य नहीं होते। मूलशङ्कर का लक्ष्य स्पष्ट था। उनके समस्त उद्योग उसी लक्ष्य की प्राप्ति के लिये थे। इसलिये उन्होंने अपने मित्रों द्वारा विवाह के विरुद्ध अनुरोध करना आरम्भ कर दिया।

परन्तु इन लोगों के विचार उच्च न थे। वह मूलशङ्कर के लक्ष्य को समझने में सर्वथा असमर्थ थे। अतः ज्यों ज्यों मूलशङ्कर ने विवाह का प्रतिरोध किया त्यों त्यों मा बाप ने

विवाह करने की शीघ्रता की। अन्त को विवाह का अवसर समीप ही आगया। महात्मा बुद्ध का विवाह ऐसे समय हुआ था जब उनको वैराग्य का मान भी न था। उनको वैराग्य ऐसे समय उत्पन्न हुआ, जब एक तरुणि और एक छोटे बालक के पालन पोषण का भार वह अपने ऊपर ले चुके थे। अभी गृहस्थाश्रम में उन्होंने पग ही रक्खा था। न केवल उन्होंने स्वयं ही ऐसा किया किन्तु एक कोमल रमणी को भी अपने साथ उस आश्रम का धर्म-पालन करने के लिये निमंत्रित कर लिया था। अभी सम्पूर्ण आश्रम-यात्रा पार करने को शेष थी कि इतने में उनको वैराग्य हो गया और वह एक महान् कर्त्तव्य के लिये तात्कालिक कर्त्तव्य को त्यागने के लिये बाधित हो गये। आश्रम-धर्म के पालन करने में यह उनकी बात कहां तक न्याय संगत थी इसकी विवेचना करने का हम जैसे क्षुद्र जीवों को अधिकार नहीं है। परन्तु मूलशङ्कर के आत्मा में कर्त्तव्य परायणता के यह सब विचार अवश्य उठते होंगे। उन्होंने अपने असाधारण तर्क से जान लिया होगा कि यदि एक बार विवाह ग्रंथि पड़ गई तो उसका सुलझाना अनेक वर्षों तक दुस्तर होगा। और वह गृहस्थ धर्म के कर्त्तव्यों को पालन करने के लिये बाधित होंगे। ऐसी अवस्था में उनके उच्चतम भाव उसी प्रकार मुरझा जायंगे जैसे एक कली पर तुषार पड़ने से उसके जीवन का अन्त हो जाता है।

अतएव मूलशङ्कर ने दृढ़ प्रतिज्ञा की कि मैं अपना विवाह कदापि न होने दूंगा। जैसे स्वतंत्र चिड़िया पिंजड़े को तोड़ कर भागना चाहती है जिस प्रकार शेर लोहे के कटहरे को तोड़ देता है। उसी प्रकार सिंह-हृदय मूलशङ्कर ने गृहस्थ रूपी कटहरे को तोड़ कर फ़ेंक दिया और कार्तिक मास सम्वत् १६५६ को एक दिन सायंकाल के समय घर से चल दिये।

तीसरा अध्याय

गुरु की खोज

घर से निकल कर मूलशङ्कर ने कपड़े रंग लिये। कमण्डल ले लिया और योगियों की खोज में तत्पर हुये।

भारतवर्ष एक योगप्रधान देश समझा जाता है। योग विद्या और अध्यात्म विद्या इस देश की विशेषता है। पाश्चात्य देशों और विशेष कर अमेरिका में इस की बड़ी प्रशंसा है। भारतवर्ष के साधारण पुरुष भी अमेरिका में योगी होने के कारण बड़ी ख्याति प्राप्त कर लेते हैं। अमेरिका निवासी एक महाशय स्वामी रामचरक ने भारतवर्षीय योग पर कई पुस्तकें भी लिखी हैं। परन्तु इस युग में योग के सम्बन्ध में बड़ी अन्धा-धुन्धी है। जिधर देखो उधर साधु और सन्यासियों का जमघट है। हर एक योगी होने का दम भरता

है। परन्तु सच पूछिये तो यह सब आडम्बरी और पाखण्डी हैं। योग के वास्तविक इच्छुक को इन से कोई शान्ति नहीं होती। नवयुवकों को तो यह अपनी ठग विद्या से नित्य प्रति बहकाया करते हैं। साधुओं के अनेक अखाड़े मिलेंगे जिनमें पंद्रह २ सोलह २ वर्ष के लड़के चिमटा हिलाते और अपने से चौगुनी आयु के बुड्ढों को बच्चा बच्चा कह कर पुकारा करते हैं। एक अनुभव रहित युवक के लिये बहुत बड़ी कठिनाई है। पहले तो योगियों की खोज करें। फिर यह जांच भी करे कि यह वास्तव में योगी हैं या नहीं। पाखण्डी गुरुओं के पाखण्डी चेले नित्यप्रति युवकों को अपने चंगुल में फंसाने के लिये फिरा करते हैं।

युवक मूलशङ्कर को इन सब कठिनाइयों का सामना करना पड़ा। उनकी अवस्था इस समय केवल २१ वर्ष की थी। उनकी योग्यता केवल इतनी ही थी कि वह योग-विद्या के सच्चे इच्छुक थे। कोई योगी गुरु उनको न मिल सका था और उनके लिये विशेष आपत्ति यह थी कि सच्चे गुरु को कैसे पहिचाने। वह घर से निकल कर कई स्थानों में योगियों की खोज में फिरते रहे। कुछ दिनों पीछे उन्होंने सुना कि सिद्धपुर में एक मेला होने वाला है। वहां अनेक साधु इकट्ठा होंगे। इसलिये वह सिद्धपुर की ओर चल पड़े। सिद्ध-पुर उनके नगर से समीप ही है। वहां जाकर उन्होंने कई पण्डितों तथा वैरागियों से परिचय किया और एक मन्दिर

में अधिक उठने बैठने लगे। सिद्धपुर में जिस मनुष्य से उनका अधिक परिचय हो गया वह इनके पिता को भी जानता था। मूलशङ्कर के आत्मीय लोग उनकी खोज में थे। उनकी माता अपने पुत्र के शोक में पीड़ित हो रही थीं। पं० अम्बाशङ्कर के आदमी इधर उधर दौड़ रहे थे। इस समाचार को पाते ही अम्बाशङ्कर ने कुछ आदमी लेकर सिद्धपुर पर आक्रमण किया और नीलकण्ठ के मन्दिर में बैठे हुये मूलशङ्कर को गिरिफ़्तार कर लिया।

मूलशङ्कर के लिये यह एक अपूर्व घटना थी। ऐसा अनुभव उनको पहले प्राप्त न हुआ था। विवश होकर वह अपने पिता के साथ हो लिये। पिता भिगोये कपड़े और कमण्डल, देखकर आग बबूला हो गये। कमण्डल तोड़ डाला, और कपड़े फाड़ डाले। मूलशङ्कर को नये वस्त्र दिये गये। यदि मूलशङ्कर के पिता शान्ति से काम लेते और अपने पुत्र को कुछ स्वतंत्रता देने की प्रतिज्ञा करते तो सम्भव था कि मूलशङ्कर घर जाकर वहीं अपने उद्योग में तत्पर होते और उस दशा में भारतवर्ष और सम्भवतः संसार का इतिहास ही भिन्न होता। हिन्दु जाति के इतिहास में जो परिवर्तन होने वाला था उसकी वहीं इति श्री हो गई होती परन्तु दैव-इच्छा प्रबल थी। प्रत्येक घटना में सहस्रबाहु परमात्मा का हाथ था।

मूलशङ्कर को ले जाकर पहरे में रख दिया गया और सिपाहियों को आज्ञा हुई कि रात के समय भी जागते हुये

उनकी देख भाल करें। पं० अम्बाशंकर को भय था कि अवसर पाकर मूलशङ्कर फिर भाग निकलेगा। हुआ ऐसा ही। तीन रातें तो किसी प्रकार कटीं। परन्तु चौथी रात को सिपाही के सो जाने पर निरन्तर अवसर खोजने वाले मूलशंकर ने फिर प्रस्थान कर दिया। एक दिन तो भोजन और जल बिना केवल एक वृक्ष के ऊपर पत्तों में छिपे रहे। कर्त्तव्य-परायणता मनुष्य से क्या क्या नहीं कराती।

यह मूलशंकर का अन्तिम प्रयाण था। इसके पश्चात् उनको अपने पिता अथवा अन्य किसी आत्मीय के दर्शन न हुये। पिछली गिरिफ़्तारी से उनको अनुभव भी बहुत हो चुका था इसलिये अब वह परिचित मार्गों से यात्रा न करते थे। और बहुधा ऐसे समय चलते थे कि उन पर सन्देह न हो सके। शीघ्र ही वह अपने स्थान से दूर निकल गये। यहां हम थोड़ा सा वृत्तान्त इन महात्मा के निज शब्दों में ही देते हैं।

"मैं सिद्धपुर से नर्मदा तीर वर्त्त प्रदेश में गया। वहां योगानन्द स्वामी के साथ मेरा साक्षात् हुआ। योगानन्द के साथ कृष्ण शास्त्री नामक एक महाराष्ट्रीय ब्राह्मण थे। वे मुझको किसी २ विषय में शिक्षा दिया करते थे। और उसके पश्चात् उसी राजगुरु के साथ योगाभ्यास किया करता था। २३ वा २४ वर्ष की आयु के समय चाणोद में मेरी एक सन्यासी के साथ भेंट हुई। शास्त्रानुशीलन में मेरी प्रगाढ़ आकाङ्क्षा थी। और सन्यासाश्रम को शास्त्र की शिक्षा के

लिये सर्वापेक्षया सुविधा जनक समझकर उसी सन्यासी से मैंने दीक्षा ग्रहण करली (इन सन्यासी का नाम स्वामी पूर्णानन्द सरस्वती था–ले०)। दीक्षा के पश्चात् मैं दयानन्द सरस्वती के नाम से परिचित हो गया। वहां दो राजयोग परायण जो स्वामियों के साथ भी मेरा साक्षात् हुआ। उनके साथ मैं अहमदाबाद को चला गया। वहां मेरा एक ब्रह्मचारी से मिलना हुआ। परन्तु मैं उनका संग छोड़कर हरिद्वार की ओर चला गया। उस समय हरिद्वार में कुम्भ का मेला था।" यह सन् १८५४ ई० को बात है। हरिद्वार से चलकर मूलशङ्कर महाशय जिनको हम अब से स्वामी दयानन्द सरस्वती कहेंगे हृषीकेश, टिहरी, रुद्र प्रयाग, गुप्त काशी, गौरीकुण्ड, शिवपुरी, तुङ्गनाथ, ऊखीमठ, जोशीमठ, बदरीनारायण, रामपुर, मुरादाबाद, फ़रुख़ाबाद आदि स्थानों से घूमते हुये सन् १८५५ ई० में कानपुर पहुंचे। वहां से काशी, इलाहाबाद आदि होते हुये नर्मदा के निकास की खोज में गये। इसके पश्चात् सन् १८५८ ई० में उनका मथुरा में आगमन हुआ इस समय स्वामी दयानन्द की अवस्था ३४ वर्ष की थी।

इस अन्तर की अनेक घटनायें उल्लेखनीय हैं। बारह तेरह वर्ष के निरन्तर भ्रमण ने स्वामी दयानन्द को अधिक अनुभवी बना दिया था। अब आयु में भी बहुत बड़ी परिपक्वता आगई थी। अनेक साधु सन्यासियों से परिचय हो गया था। परमानन्द परमहंस के अतिरिक्त व्यासाश्रम के योगानन्द,

वाराणसी के सच्चिदानन्द, केदारनाथ के गङ्गा गिरि, और ज्वालानन्द पुरी और शिवानन्द गिरि प्रभृतियों के नाम उल्लेखनीय हैं। अन्त के दो सन्यासियों से दयानन्द ने योग विद्या गूढ़तत्व समूह की शिक्षा प्राप्त की। प्रत्युत यों कहना चाहिये कि योग शिक्षा के सम्बन्ध में वह इन पुरी और गिरि के ऋण सूत्र में निबद्ध थे। इनके अतिरिक्त कृष्ण शास्त्री और काशीस्थ काका राम और राजाराम शास्त्री प्रभृति सुपण्डितों के साथ भी उनका वार्त्तालाप और परिचय हो गया था।"

"व्याकरण पढ़ने से भिन्न वह उस समय अन्यान्य ग्रन्थों की आलोचना में भी रत रहते थे। परमानन्द परमहंस से वेदान्त पढ़ने...के अतिरिक्त जब वह टहरी में ठहरे हुये थे तो वहां के राजपण्डित विशेष से तन्त्र ग्रन्थों को लेकर पाठ करते थे। किन्तु उस पाठ से तंत्रों में उनकी उलटी अश्रद्धा उत्पन्न हो गई थी। क्योंकि थोड़े ही पाठ करने से उन्होंने उनके भीतर भाषागत, भाष्यगत, और अर्थगत अनेकानेक अशुद्धियां देख ली थीं। विशेषतः उनका अधिकांश असंगति दोष से दूषित था। और उनके बीच में नितान्त निन्दनीय पापाचारों की परम पवित्र धर्म्म में गणना देखकर उन्होंने असीम घृणा के साथ तंत्र पाठ का परित्याग कर दिया।"

"बहुत से स्थानों में पर्यटन करने और बहुत से साधु सन्यासियों के सत्संग से उन्होंने जैसे योग विषयक नूतनतर

तत्वों को जान लिया था वैसे ही उन्होंने यह भी समझ लिया था कि उन तत्वों को कार्य्य में परिणित करने के निमित्त योगाभ्यास में अधिक समय लगाना आवश्यक है क्योंकि कोई ज्ञान भी, श्रुत हो अथवा पठित अभ्यास वा अनुशीलन के बिना कार्य्यकर नहीं हो सकता। सुतरां दयानन्द की योग चर्य्या का समय दिन प्रतिदिन दीर्घतर होने लगा।"

यद्यपि इस बारह वर्ष की दीर्घ यात्रा में स्वामी दयानन्द विद्या प्राप्ति और योग साधन दोनों ही करते रहे तौ भी अभी उनको अपनी इच्छा के अनुसार गुरु नहीं मिला था। बड़े २ धुरन्धर विद्वान भी उनकी शान्ति नहीं कर सकते थे। असाधारण शिष्य के लिये असाधारण ही गुरु चाहिये। अब तक जो गुरु मिले थे उनमें कुछ भी मौलिकता न थी। वे सब लकीर के फ़कीर थे। उनमें वह विद्युत शक्ति न थी जो स्वामी दयानन्द की आन्तरिक और गुप्त शक्तियों को विकास दे सके। उनमें ऐसा सामर्थ्य न था जो उनको अपने महान लक्ष्य की प्राप्ति में सहायता दे सके। इसलिये जहां से जो मिल सका उसको ग्रहण करने के पश्चात् वह निरन्तर सच्चे गुरु की खोज में रहे।

उन्होंने सुन रक्खा था कि मथुरा में विरजानन्द नामी दण्डी रहते हैं और विद्या में बड़े निपुण हैं। इसीलिये वह मथुरा आये थे।

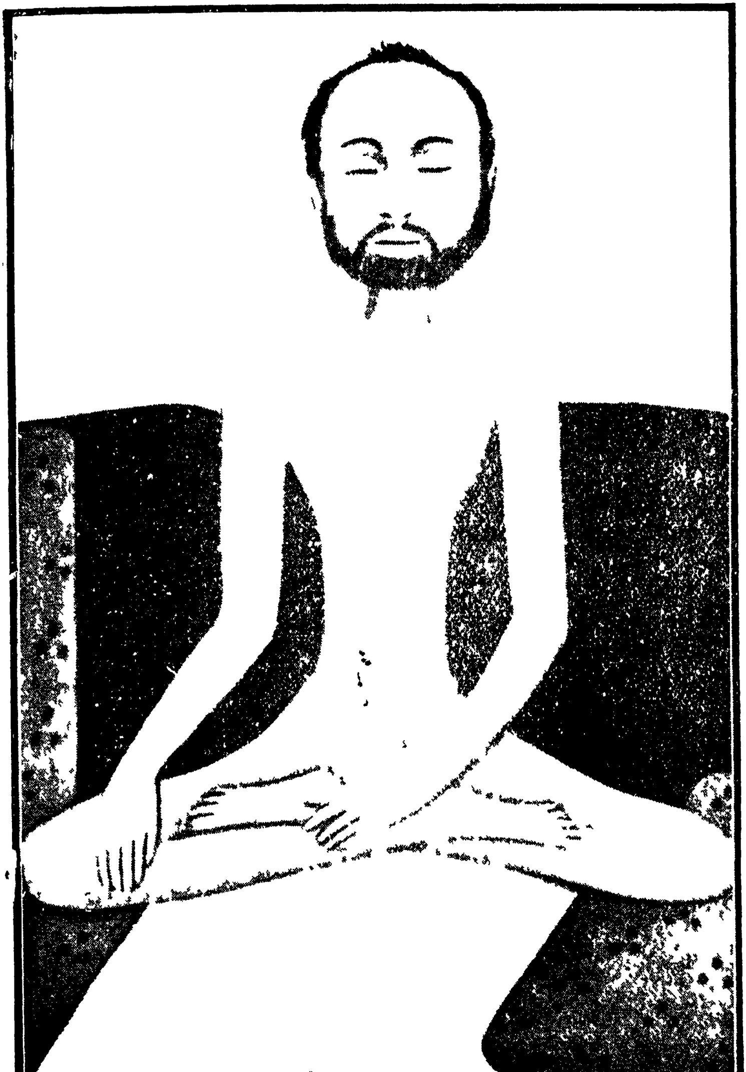
विरजानन्द पंजाब प्रान्त के कर्त्तारपुर नगर के निकटस्थ

किसी ग्राम के रहने वाले थे। यह सारस्वत ब्राह्मण थे। पांच वर्ष की अवस्था में ही इनकी आंखें जाती रही थीं और अपने भाई भौजाई की क्रूरताओं से तंग आकर उनको दस ग्यारह वर्ष की आयु में ही घर छोड़ना पड़ा था। परन्तु वाह्य चक्षुओं के बदले ईश्वर ने उनकी भीतरी आंखें खोल दी थीं। ऐसे प्रौढ़ विद्वान् संसार में कम होते हैं। मालूम होता है कि उन्होंने घर से निकल कर ही सन्यास ले लिया था। कुछ दिनों तो हृषीकेश में रहे। "वहां अधिकतर समय गङ्गा के जल में निमज्जित होकर गायत्री मंत्र के जप में लगाते थे।" फिर वह कनखल चले आये और पूर्णाश्रम नामी सन्यासी से व्याकरण पढ़ते रहे। वहां से गया, काशी, प्रयाग आदि तीर्थों में भ्रमण करते हुये सोरों (ज़िला एटा) में रहने लगे।

सोरों में अलवर नरेश महाराज विनयसिंह के साथ विरजानन्द जी अलवर पहुंचे। वहां महाराज ने स्वामी जी से संस्कृत पढ़ना आरम्भ किया था और प्रति दिवस तीन घण्टे तक पढ़ा करते थे, एक दिन किसी विशेष कार्य्य से राजा साहेब पाठ के लिये उपस्थित न हो सके। स्वामी विरजानन्द इसी बात से रुष्ट हो गये और समस्त सामग्री वहीं छोड़कर सोरों चले आये। इस घटना से विरजानन्द जी के चरित्र पर बहुत कुछ प्रकाश पड़ता है। वह कर्म्मनिष्ठ, अपूर्व विद्वान और निर्भीक थे। लोभ उनको किंचित भी

नहीं था, राजा महाराजा की परवाह न थी। वह अलवर केवल इसी शर्त पर गये थे कि महाराज को विद्या पढ़ायेंगे। सम्भव है उन्होंने सोचा हो कि एक प्रसिद्ध राज्य के शासक को पढ़ाने से अधिक उपकार होगा। अलवर नरेश भी उनका सत्कार करते थे और विशेष राज्यकार्य्य में उनसे परामर्श भी करते थे। इस प्रकार के महान सन्यासियों का राजसभाओं में रहना राजों को अनेक कुव्यसनों और प्रजा को अनेक दुःखों और अत्याचारों से बचा देता है। परन्तु विरजानन्द जी को क्रोध अधिक था। सम्भव है उन्होंने सोचा हो कि राजों महाराजों को नियमानुसार पढ़ाना कठिन है। इसीलिये उन्होंने अलवर त्याग दिया और गङ्गा के तीर फिर आ बसे। सोरों से वह भरतपुर भी गये। परन्तु अन्त में मथुरा रहने लगे। ३२ वर्ष मथुरा में वास करने के पश्चात् ९१ वर्ष की आयु में आश्विन बदी १३ सोमवार सम्वत् १९२५ विक्र० (सन् १८६८) को शरीर त्याग दिया।

हम ऊपर लिख चुके हैं कि परमात्मा ने वाह्य गोलकों के बदले विरजानन्द को आन्तरिक चक्षुयें दी थीं। वह वास्तविक प्रज्ञा चक्षु थे। उनकी स्मृति ऐसी प्रबल थी कि एक बार बोलने से ही पाठ को कण्ठ कर लेते थे उनको बार २ घोंटने की आवश्यकता न होती थी। यही कारण था कि अन्धे होते हुये भी उनको शास्त्र,कण्ठ थे। वह प्राचीन आर्ष ग्रन्थों के प्रेमी थे, वेद पर उनको निष्ठा थी। वैदिक धर्म को अपूर्व और



परिव्राजकाचार्य्य श्री स्वामी विरजानन्द जी महाराज

वैदिक जीवन को ही जीवन का सार मानते थे। परन्तु नवीन और अनार्ष ग्रन्थों से उन को घृणा भी बहुत थी। उनका विचार था कि अनार्ष ग्रन्थों ने इ ी सत्य सनातन वैदिक धर्म का लोप कर दिया। वर्त्तमान पण्डित मण्डल से भी उनको घृणा हो चुकी थी। इस का कारण एक विचित्र घटना थी। कहते हैं कि अष्टाध्यायी के किसी सूत्र पर श्रीसम्प्रदाय के वैष्णव रंगाचारी और विरजानन्द जी में शास्त्रार्थ हो पड़ा। रंगाचारी सिद्धान्त कौमुदी की सहायता से किसी पद विशेष को सप्तमी तत्पुरुष कहते थे और विरजानन्द जी अष्टाध्यायी का अनुसरण करके उसे षष्ठी तत्पुरुष बताते थे। झगड़ा अधिक बढ़ा और काशी के पण्डितों तक की सम्मति मांगी गई। रंगाचारी एक बड़ी गद्दी के अधिपति थे। उनके शिष्यों में धन की कमी न थी। बात की बात में लाखों व्यय कर सकते थे। झगड़ा इतना बढ़ गया था कि जिस पक्ष को पराजय होती उसी की ख्याति में बट्टा लगता। विरजानन्द जी धन शून्य लंगोट बंद सन्यासी थे, सत्य ही उनका आश्रय था। परन्तु रंगाचारी की ख्याति में बट्टा लगने से उन के यशरूपी राज्य में विप्लव हो जाने का भय था उनके शिष्य अपने गुरु के मान को सत्य से भी अधिक प्रिय समझते थे अतः उन्होंने काशी के विद्या दिग्गजों को अपनी ओर मिला लिया। जो बात पाण्डित्य से सिद्ध न हो सकी थी उसको रुपयों की झन्कार ने सिद्ध कर दिया। लक्ष्मी और सरस्वती में सौतिया डाह प्रसिद्ध है। और लक्ष्मी ने

अनेक बार सरस्वती को पराजित कर दिया है। काशी के वाचस्पतियों का धनपतियों के वश में आ जाना कोई असाधारण घटना नहीं है।

"यस्यास्ति वित्तं स नरः कुलीन।"

रंगाचारी के पक्ष में व्यवस्था दे दी गई और विरजानन्द पराजित हो गये। परन्तु विरजानन्द की पराजय विद्या की पराजय थी। परन्तु विरजानन्द इस प्रकार मानने वाले न थे। उनको खेद था तो यह कि काशी जैसे संस्कृत विद्या के केन्द्र में भी विद्या और सत्य का इस प्रकार तिरस्कार होता है। उन्होंने तभी से शेखर, कौमुदी, मनोरमा आदि व्याकरण के आधुनिक ग्रन्थ तिरस्कृत कर दिये थे। केवल पाणिनि को ही प्रमाणित मानते थे और सब को कपोल कल्पित कहते थे। यहां तक कि भागवत आदि पुराणों को भी वेद विरुद्ध और गप्प समझते थे। उन्होंने कौमुदी को पढ़ाना बन्द कर दिया था। जो विद्यार्थी उनके पास आता उसको वह यही परामर्श देते थे कि पहले आधुनिक ग्रन्थों को भूल जाओ तभी आर्ष ग्रन्थ पढ़ सकोगे। उनको भट्टोजी दीक्षित कृत कौमुदी से इतनी घृणा थी कि इस घृणा का अपना शिष्यों के हृदयों में पूर्ण समावेश करने के लिये वह उनसे कौमुदी की पुस्तक में जूते लगवाया करते थे।

एक बार उन्होंने यह प्रयत्न भी किया था कि अनार्ष ग्रन्थों के प्रचार को सर्वथा भारतवर्ष से वहिष्कृत कर दें। इस

कार्य्य के लिये उन्होंने जयपुर नरेश महाराज रामसिंह को उत्तेजित किया। जब वह आगरे आये तो विरजानन्द जी उनसे मिले और कहा कि आप एक बड़ी सभा कीजिये जिसमें भारत के सब राजे और सब विद्वान पण्डित आवें। मैं उनके सामने शेखर कैामुदी आदि अनार्ष व्याकरणों का खण्डन करूंगा। महाराज रामसिंह ने इस प्रस्ताव को स्वीकार कर लिया। और इसके लिये तीन लाख रुपयों व्यय करने के लिये भो उद्यत हो गये। यदि यह सभा हो जाती तो बहुत ही अच्छा होता। परन्तु सत्य के दबाने में स्वार्थ का भी बहुत बड़ा हाथ है। जब कोई असत्य मत संसार में प्रचलित हो जाता है तो लाखों आदमियों के पेट उसी असत्य के सहारे पलने लगते हैं। ऐसे समय में यदि कोई महापुरुष सत्य-प्रदर्शन का प्रस्ताव करता है तो उन सब पेटों में खल-बली मचने लगती हैं। लोग दूर दूर की सोचने लगते हैं किसी को अपने यश की चिन्ता होती है, कोई अपनी ख्याति की रक्षा करने का उपाय सोचता है। कोई अपनी आजीवि-का छूट जाने को डरता है। इस प्रकार एक सत्य के अनेक शत्रु उठ खड़े होते हैं। यही हाल इस समय भी हुआ। महाराज रामसिंह के जयपुर पहुंचते ही मंत्रिगण तथा पण्डित मण्डल ने उनके मन से इस प्रकार की सभा बुलाने का विचार दूर कर दिया।

विरजानन्द जी अब क्या करते! चुप बैठे रहे। धन पास

न था, वृद्धावस्था थी। नेत्र हीनता भी अधिक परिश्रम में बाधक थी। परन्तु उन्होंने आर्ष ग्रन्थों के पढ़ाने का कार्य्य निरन्तर जारी रक्खा। और उस दिन की प्रतीक्षा करने लगे जब उनका कोई योग्य शिष्य खड़ा होकर उनके उद्देश्य की पूर्त्ति कर सके।

इधर शिष्य दयानन्द सच्चे गुरु की खोज में थे। उधर गुरु विरजानन्द को भी सच्चे शिष्य की तलाश थी। संसार में सच्चे गुरु और सच्चे शिष्य दोनों ही दुर्लभ हैं। सत्य की खोज और सत्य का प्रचार ही उनका जीवनोद्देश्य होना चाहिये। वास्तविक गुरु और वास्तविक शिष्य वही हैं जो अपने सच्चे हृदय से इस श्रुति का पाठ कर सकें।

"सहनाववतु सहनौ भुनक्तु सहवीर्य्यं करवावहै।
तेजस्विनावधीतमस्तु मा विद्विषावहै॥"

वस्तुतः स्वामी दयानन्द और स्वामी विरजानन्द ऐसे ही शिष्य और गुरु थे। उनकी अवस्थाओं में भी ऐसा ही अन्तर था। स्वामी दयानन्द पूर्ण युवा ३४ या ३५ वर्ष के लगभग थे। गुरु विरजानन्द ८१ वर्ष के हो चुके थे। विद्या के गम्भीर महोदधि में डुबकियां लगाने के अतिरिक्त उनका अनुभव भी तीन चौथाई शताब्दी से अधिक हो चुका था। इस अवस्था में मनुष्य की अपनी मृत्यु पर ही दृष्टि रहती है विशेष कर विद्या योग तथा बुद्धि का स्वामी तो संसार के समस्त विषय भोग से विरक्त हो चुकता है। गुरु विरजा-

नन्द की यही दशा थी। प्रातःकाल से पूर्व योग करते और सूर्य्यास्त के पश्चात् भी योग में निमग्न हो जाते थे। दो घण्टे सोना ही उनके शरीरावलम्बन के लिये पर्य्याप्त था। दूध और फल ही उनका विशेष भोजन था। पूर्वाह्न और अपराह्न में अध्यापन का कार्य करते थे। अपनी विद्या को अपने पीछे सुरक्षित छोड़ जाना ही उनकी एक मात्र अभिलाषा थी। इसी अमूल्य कोष के लिये उपयुक्त कोष-गृह की खोज थी। मानों ८१ वर्ष का बुड्ढा यही सोच रहा था कि कोई मुझ से वैदिक कोष की कुंजी लेले और मैं संसार से चल दूं।

चौथा अध्याय

गुरु के चरणों में।

स्वामी दयानन्द १८५८ ई० की गर्मियों में मथुरा आये थे। उस समय भारतवर्ष की विचित्र अवस्था थी। एक वर्ष पूर्व यहां के निवासियों ने अंगरेज़ों की आधीनता से स्वतंत्र होने के लिये अनेक प्रयत्न किये थे। वीरता, निष्कपटता, स्वार्थ-त्याग के साथ कायरता, अत्याचार, घोर हत्याकाण्ड तथा स्वार्थ आदि दुष्ट भावों ने भी अपना योग दिया था। फल वही हुआ जो होना था अर्थात् विफलता। स्वतंत्र तो सभी होना चाहते हैं परन्तु स्वतंत्रता के लिये एक विशेष भवन चाहिये। स्वतंत्रता की देवी उन गन्दे मन्दिरों में नहीं रहती जहां वैर

भाव, अविद्या, दुराचार और स्वार्थ का कूड़ा पड़ा हो। भारत वर्ष इन बीमारियों के लिये कई सहस्र वर्षों से प्रसिद्ध रहा है। महाभारत के समय भी इन रोगों की कमी न थी। परन्तु शनैः २ इन में आधिक्य ही होता गया। हिन्दुओं के पश्चात् मुसल्मानी राज्य और मुसल्मानी राज्य के पश्चात् सिक्ख, मरहठा आदि के उत्थान, पतन और उसके पश्चात् अंगरेज़ों के आगमन का कारण भी यही रोग हुये थे। रोग आन्तरिक था परन्तु समझा यही जाता था कि यह बाहिरी रोग है और विद्रोह से दूर हो जायगा। हिन्दू जाति की संगठन-शक्ति नष्ट हो चुकी है। वह गुण जो संगठन में साधक होते हैं लुप्तप्राय हो गये हैं। जाति रूपी पुस्तक के पन्ने तितर बितर फैले पड़े हैं। जिल्द टूट गई हैं। गोंद नष्ट हो चुका है फिर सफलता हो तो कैसे। यह संगठन, यह स्वार्थ त्याग, यह ईश्वर विश्वास विद्रोह से नहीं आता और नहीं आया। १८५७ ई० का विद्रोह पुराल की आग के समान उठा और दब गया। इस समय उसकी केवल राख पड़ी थी। जिस अंगरेज़ी शासन को हटाने के लिये विद्रोह किया गया वह राज्य अधिक दृढ़ता से जम गया।

स्वामी दयानन्द का आत्मा कुछ कम स्वतंत्रता-प्रिय न था। वस्तुतः स्वतंत्रता का जो प्रेम इन के हृदय में उपस्थित था वह तो संसार के अन्य किसी हृदय में शायद उपस्थित ही न होगा। वह न केवल शासन सम्बन्धी शृङ्खलाओं से ही

मुक्त होना चाहते थे किन्तु जीवन की सभी प्रकार की आधीनता उनको असह्य थी। ३४ या ३५ वर्ष के वीर युवक के हृदय में देश के स्वतंत्रता के लिये हाथ पैर मारते देख कर न जाने क्या क्या भाव उठते होंगे। स्वामी दयानन्द ने इस विषय में कोई लेख या कथन नहीं छोड़ा है। परन्तु एक बात स्पष्ट है। उनके सामने एक महान् उद्देश्य था। वह संसार को पराधीनता से छुड़ाना चाहते थे। वह पराधीनता के मूल कारण को नष्ट करना चाहते थे। यही कारण है कि उन्होंने अपने निर्दिष्ट और नियत मार्ग का त्याग नहीं किया वह अपने पथ से विचलित नहीं हुये। यह धृति उनके समस्त कार्य्यों में पाई जाती है। वह अटल और अटूट्य शिला के समान संसार सागर में स्थिर रहते थे। कोई प्रलोभन, कोई भीरुता, कोई यश, कीर्त्ति या अन्य चमकीले पदार्थ उनको डिगा न सकते थे।

जिस समय स्वामी दयानन्द ने गुरु विरजानन्द का द्वार खटखटाया तो कहते हैं कि पहलेपहल विरजानन्द ने उनको पढ़ाना स्वीकार न किया। स्वामी दयानन्द संन्यासी थे। उस समय और आजकल भी लाखों सन्यासी चिमटा हिलाये दिखाई पड़ते हैं जिनका न तो कोई उद्देश्य है न उनके आचार व्यवहार का ठीक। स्वामी विरजानन्द ऐसे व्यक्तियों पर अपना समय तथा श्रम नष्ट नहीं करना चाहते थे। उनको भय था कि न जाने कब इस साधु का मन उचट जाय और चिमटा

उठा कर चलता बने। परन्तु अति शीघ्र ही स्वामी दयानन्द ने उनको निश्चय करा दिया कि उनके मन में सत्य-ग्रहण करने की अपूर्व इच्छा है।

अध्ययन के विषय में गुरु की स्वीकृति लेकर स्वामी दयानन्द ने अपने रहन सहन का भी प्रबन्ध कर लिया। वस्तुतः हर स्थान पर ऐसे प्रेमी और श्रद्धालु पुरुष मिल जाते हैं जो ऐसे सज्जनों की सहायता कर सकें। विश्राम घाट पर लक्ष्मीनारायण के मन्दिर की एक कोठरी स्वामी दयानन्द के निवास स्थान के लिये नियत हुई। और पहले दुर्गा प्रसाद खत्री के घर और उसके पश्चात् अमरलाल ज्योतिषो बाबा के घर भोजन का प्रबन्ध हो गया। अमरलाल एक प्रसिद्ध ज्योतिष् विद्या के पण्डित थे। इसी पाण्डित्य के कारण सींधिया नरेश ने उनको कई गांव दान दिये थे जिनकी आय से वह नित्य सौ ब्राह्मणों को भोजन खिलाया करते थे। अमरलाल गुजराती ब्राह्मण थे। इसलिये वह स्वामी दयानन्द को सजातीय समझ कर उन पर विशेष प्रेम करते थे। स्वामी दयानन्द का स्वयं यह कथन है कि "भोजन और ग्रन्थादि के सम्बन्ध में मुक्तहस्त से सहायता करने के कारण मैं अमरलाल का अत्यन्त बाधित हूं। भोजन के विषय में वह इतने प्रयत्नवान् थे कि मेरे भोजन का प्रबन्ध किये बिना आप भोजन नहीं करते थे"।

अब अध्यापन आरम्भ हुआ। गुरु विरजानन्द की पहली

शिक्षा यही थी कि अनार्ष ग्रन्थों को भूल जाओ। यह उनके पाठ का पहला शब्द होता था। सम्भवतः स्वामी दयानन्द को भी भट्टोजी दीक्षित की सिद्धान्त कौमुदी पर जूते लगाने पड़े होंगे। इस बात को कुछ आधुनिक विद्वानों ने घृणा की दृष्टि से देखा है। परन्तु वह गुरु विरजानन्द के भाव को नहीं समझ सके हैं। वस्तुतः आर्ष ग्रन्थों का लुप्तप्राय हो जाना और अनार्ष ग्रन्थों को सर्वसम्मानित होना ऐसा भयङ्कर रोग था जिसके लिये कड़वी से कड़वी औषधि की आवश्यकता थी। स्वामी दयानन्द ने अपने "सत्यार्थ प्रकाश" में स्वयं अनार्ष ग्रन्थों को विष के तुल्य बतलाया है। विष के साथ जो कुछ घृणा का व्यवहार किया जाय वह कम नहीं है।

गुरु विरजानन्द जी उच्चारण पर भी बहुत ध्यान देते थे। संस्कृत पाठशालाओं में इस ओर बहुत कम ध्यान दिया जाता है। संस्कृत के विद्यार्थी स, श, ज, ज़, ख, ष, ज, य आदि को एक ही प्रकार से पढ़ते हैं। ज्ञ का उच्चारण तो सर्वथा ही व्याकरण के विरुद्ध होता है। स्थान और प्रयत्न विषयक पाठ पढ़ाये तो जाते हैं परन्तु उनको व्यवहार में लाया नहीं जाता। संस्कृत जैसी पूर्ण और विज्ञानानुसारिणी भाषा के लिये शुद्ध उच्चारण की कितनी आवश्यकता है और किंचित अशुद्ध उच्चारण से कितना अर्थ भेद हो जाता है उसका उदाहरण हम भट्टि काव्य के निम्नलिखित श्लोक से देते हैं।

"यद्यपि बहु नाधीषे तथापि पठ पुत्र व्याकरणम्।
स्वजनः श्वजनो माभूत् सकलं शकलं सकृत शकृत्॥"

गुरु विरजानन्द के संरक्षण में स्वामी दयानन्द की उच्चारण सम्बन्धी अशुद्धियां दूर हो गई। इस बात पर उनके पूर्व अध्यापकों ने अधिक ध्यान नहीं दिया था। स्वामी दयानन्द ने स्वयं "सत्यार्थ प्रकाश" के तीसरे समुल्लास में उच्चारण पर बहुत बल दिया है और माताओं को उपदेश दिया है कि बच्चों का उच्चारण बचपन से ही ठीक किया करें।

"दयानन्द उनके पास पाणिनि और पाणिनि के अनुपम व्याख्या रूप महाभाष्य के पाठ में प्रवृत्त हुये। उसके पश्चात् उपनिषद्, मनुस्मृति, ब्रह्मसूत्र, और पतञ्जलि के योग सूत्र प्रभृति दर्शनशास्त्रों को अध्ययन करने लगे। क्रमशः वेद और वेदाङ्गों के भी पाठ में प्रवृत्त हुये"।

"दयानन्द अपने आचार्य के अदृष्टपूव प्रभाव को देखकर विमोहित होने लगे, उनके अपरिमित पांडित्य और अत्यन्त आश्चर्य्यमय शक्ति का परिचय पाकर वह विस्मित हो गये। उन्होंने अनेकानेक आचार्य्यों के पास अध्ययन किया था। परन्तु इससे पूर्व विरजानन्द के समान आचार्य्य और कहीं नहीं मिला था। सूर्यमण्डल से जैसे अविश्रान्त तेज की राशि निःसृत होती है अथवा निर्झर से जैसे अनवरत जल धारा निर्झरित होती है वैसे ही दयानन्द ने देखा कि विरजानन्द



श्री स्वामी श्रद्धानन्द जी महाराज

[देखो पृष्ठ १३४]

के वागिन्द्रिय से नाना शास्त्रों के नाना प्रसङ्ग अविरत रूप से विनिर्गत होकर शिष्य मण्डली को विमोहित करते हैं और यह भी देखा कि वह चक्षुहीन होने पर भी अपनी प्रज्ञाचक्षु के द्वारा सब शास्त्रों के सब स्थानों को देखकर जिज्ञासित विषय को उत्तमरूप से सिद्ध कर देते हैं और विशेषतः यह देखा कि उनका देहयष्टि अस्थियों का पिंजर रह जाने पर भी वह युवाजन के समान उत्साह और तेजस्विता के साथ शास्त्र की व्याख्या में व्यापृत रहते हैं। इससे भी अधिक आश्चर्य का यह विषय था किसी ग्रन्थ वा किसी ग्रन्थ के पत्र को जन्म काल से न देखने पर भी अपनी सर्व विषय ग्राहिणी स्मृति-शक्ति के प्रभाव से क्या व्याकरण शास्त्र, क्या साहित्यसंहिता, क्या वेद वेदान्त, सब विद्याओं के सब प्रकार के तत्वों की एक एक बात को समझा देते थे। जैसे विरजानन्द के समान आचार्य्य दयानन्द ने कभी नहीं देखा था वैसे ही दयानन्द के समान भी कोई शिष्य विरजानन्द के पास कभी नहीं आया था। सुतरां दयानन्द जिस प्रकार विरजानन्द को एक अनन्य असाधारण आचार्य्य समझने लगे, उसी प्रकार विरजानन्द भी दयानन्द को एक असाधारण शिष्य समझने लगे। फलतः यह आचार्य्य-शिष्य का सम्मिलन दोनों के ही पक्ष में उत्साह और आनन्द का कारण हो गया था। विरजानन्द दयानन्द को "काल जिह्व" कहा करते थे—काल जिह्व वह कि जिसकी जिह्वा काल के

समान हो अर्थात् असत्य और भ्रान्ति जाल के खण्डन में दयानन्द की जिह्वा काल के समान होगी यह उनके हृदयङ्गम हो गया। इसके अतिरिक्त वह उन्हें "कुलङ्कर" नाम से भी पुकारा करते थे। दयानन्द विचार क्षेत्र में 'कुलङ्कर' या खूंटे के समान अविचलित रह कर विरुद्ध पक्ष को पराजित करेंगे—यह भी वह जान गये थे। पूर्वोल्लिखित वेदादि ग्रन्थानुशीलन के भिन्न दयानन्द ने विरजानन्द से भागवत आदि पुराण की खण्डन विषयक शिक्षा भी प्राप्त की थी। आर्ष ग्रन्थ की क्या पहचान है और अनार्ष या मनुष्य रचित ग्रन्थों का क्या लक्षण है उन्होंने यह विषय भी उनको विशेष रूप से समझा दिया था। मनुष्य रचित ग्रन्थों के प्रभाव और प्रतिष्ठा के विद्यमान रहने से आर्ष ग्रन्थ का अध्ययन और आदर आशानुरूप नहीं होगा—इस विषय की भी उन्होंने यथोचित शिक्षा प्रदान कर दी थी। और आर्ष ग्रन्थों के अनध्ययन और अनादर के हेतु ही भारत भूमि सैकड़ों प्रकार के साम्प्रदायिक धर्म्मों में विभक्त हो गई है और भारत समाज सब प्रकार की आवर्जनाओं का अधिकरण हो गया है। इसको भी उन्होंने अपने प्यारे शिष्य के प्रसारित हृदय में विलक्षण रूप से अङ्कित कर दिया था। इसके अतिरिक्त विरजानन्द की चारित्रशक्ति दयानन्द के भीतर संक्रामित हो गई थी। महापुरुषों की इच्छाशक्ति अति प्रबला होती है और वह इस प्रबला शक्ति द्वारा अपने प्रभाव को दूसरों के भीतर प्रविष्ट

कर सकते हैं यह स्यात् सभी जानते हैं। परन्तु सभी आधारों में उनकी शक्ति संक्रामित हो जाती है ऐसा नहीं है। अस्तु, जिस प्रकार महाद्वीप समीपस्थ छोटी २ द्वीपावली को अधिकतर उद्भासित कर देता है उस प्रकार विरजानन्द ने भी अपनी शक्ति और दीप्ति द्वारा दयानन्द की शक्ति और दीप्ति को द्विगुणित कर दिया था"।

मथुरा की वर्तमान् परिस्थिति ब्रह्मचर्य पालन के लिये सर्वथा अनुकूल नहीं है। प्रायः सभी तीर्थ स्थानों की यही दशा है। धन की पुष्कलता और ज्ञान का अभाव चरित्रहीन होने में बड़ा सहायक होता है। और विद्यार्थियों के सामने प्रलोभनों की पोटली खोल देता है। मथुरा तो इसके लिये प्रसिद्ध सी हो रही है। योगिराज श्रीकृष्ण की जन्मभूमि रासलीला का घर बन रही है। स्वामी दयानन्द ने स्वयं एक स्थान पर वृन्दावन को वैश्यावन कहा है। ऐसे स्थान में स्वामी दयानन्द का अपूर्व तप और अखण्ड ब्रह्मचर्य्य के साथ अध्ययन करना कुछ कम आश्चर्य की बात नहीं है। स्वामी दयानन्द मथुरा में पानी में कमल के समान रहे। ऐसे दैवीपुरुषों का पालन पोषण भी दैवीशक्तियों द्वारा होता है। साधारण मनुष्यों के मस्तिष्क में ऐसी बातें नहीं आ सकतीं। प्रथम तो स्वामी दयानन्द की निश्चत वृत्ति और दूसरे गुरु विरजानन्द का संसर्ग। इसने सोने पर सुहागे का काम किया। और छः सात वर्ष में स्वामी दयानन्द कुछ और ही बन गये।

पांचवां अध्याय

गुरुदक्षिणा के लिये प्रयत्न

स्वामी दयानन्द गुरु विरजानन्द के पास १८५८ ई० में आये थे। सन् १८६५ ई० तक उन्होंने अध्ययन् किया। अब पाठ समाप्त करके दीक्षान्त संस्कार की बारी आई। दयानन्द पहले से ही सन्यासी थे, बाह्य चिह्नों और बाह्य रस्मों की उन को आवश्यकता न थी। परन्तु गुरुजी से विदा होने के पहले गुरुदक्षिणा की आवश्यकता थी। भारतवर्ष में गुरु-शिष्य का जो सम्बन्ध है वह संसार के किसी देश में नहीं पाया जाता। यहां अब तो प्रथा बदल गई है और पाश्चात्य प्रभाव ने पूर्वीय भावों को आच्छादित कर लिया है। परन्तु प्राचीन और वैदिक प्रथा के अनुसार गुरु और शिष्य का जो सम्बन्ध रक्खा गया है वह बड़ा ही अद्भुत और गौरवान्वित है। आजकल शिष्य गुरु को फीस देता है और पढ़ चुकने पर स्वतंत्र हो जाता है। मानो विद्या एक वस्तु है। गुरु ने धन लेकर उसको बेच दिया। दुकानदार और ग्राहक का यहीं तक सम्बन्ध है। परन्तु वैदिक प्रणाली इससे भिन्न थी। जिस प्रकार माता-पिता अपना पितृऋण चुनाने के लिये सन्तानोत्पत्ति करते थे इसी प्रकार गुरु अपना ऋषि ऋण चुकाने के लिये स्वयं अधीत विद्या को शिष्य को दान देता था। माता-पिता सन्तान को इसलिये उत्पन्न नहीं करते कि इससे क्या

मिलेगा किंतु इसलिये कि उनके भीतर एक शक्ति है (potentiality) जिसका प्रादुर्भाव (actualization) आवश्यक है। इसी प्रकार गुरु के भीतर विद्या रूपी शक्ति है जिसका प्रादुर्भाव शिष्य द्वारा ही हो सकता है। इसलिये जब शिष्य आता है और वेदारम्भ संस्कार होता है तो गुरु शिष्य दोनों प्रतिज्ञा करते हैं।

"मम चित्तमनुचित्तं तेऽस्तु"

कि हम दोनों का चित्त एक हो। उन दोनों का एक ही उद्देश्य होता है अर्थात् विद्या की सन्तति और शृङ्खला को आगे बढ़ा दिया जाय। वस्तुतः पठन-पाठन स्वार्थ के लिये नहीं किन्तु इस वेदमंत्र की आज्ञापालन के लिये है।

यथेमां वाचं कल्याणीमावदानि जनेभ्यः।
ब्रह्मराजन्याभ्यां शूद्राय चार्य्याय,
च स्वाय चारणाय च ॥
प्रियोदेवानां दक्षिणायै।
दातुरिह भूयसमयं मे कामः।
समृद्ध्यतामुपमादो नमतु।"

इसके अनुसार गु शिष्य में अटूट्य सम्बन्ध हो जाता है और दृष्ट या अदृष्ट यह भाव जीवन पर्यन्त रहता है। आदर्श गुरु और आदर्श शिष्य का यही लक्षण है। स्वामी दयानन्द आदर्श शिष्य थे और गुरु विरजानन्द आदर्श गुरु। न

दयानन्द ने स्वार्थ के लिये पढ़ा था और न विरजानन्द ने स्वार्थ के लिये पढ़ाया था। परन्तु प्रथा के अनुसार विदा के समय दक्षिणा आवश्यक थी। दयानन्द के पास था ही क्या जो वह देते और वस्तुतः विरजानन्द को धन की आवश्यकता भी न थी। सोच विचार कर दयानन्द ने निश्चय किया कि आध सेर लौंगें ही पर्याप्त होंगी। गुरु विरजानन्द लौंग बहुत खाते थे। इसको वह बुद्धिवर्धक समझते थे। लौंग का हिन्दुओं में बहुत मान है। देवी देवता पर चढ़ाने के लिये यह बहुत उपयुक्त होती है। यह प्रथा कब आरम्भ हुई यह कहना कठिन है। दयानन्द ने लौंगें एकत्रित करके गुरु के सामने रक्खीं। और आशीर्वाद के लिये प्रार्थी हुये। परन्तु विरजानन्द इतने से कब सन्तुष्ट होने वाले थे। यह लौंगें तो साधारण शिष्य भी मांग कर लासकता था। उनको तो दयानन्दोचित दक्षिणा ही अभीष्ट थी। इस दक्षिणा के वह बहुत दिनों से अभिलाषी थे। इस अभिलाषा के सहारे उन्होंने शिष्यों को पढ़ाने में समस्त जीवन व्यतीत कर दिया था। उनको अब तक कोई ऐसा शिष्य नहीं मिला था जो उनकी अभिलाषा को पूरी कर सके। नेत्रहीन बूढ़े ने इसी प्रतीक्षा में ८८ वर्ष गुज़ार दिये थे। अब बड़े सौभाग्य से दयानन्द जैसा शिष्य मिला। इससे उनको बड़ी बड़ी आशायें थीं। विरजानन्द जिस दक्षिणा के इच्छुक थे उसको केवल दयानन्द ही दे सकते थे। बड़े से बड़े सम्राट् के वश में भी वह दक्षिणा न थी। अतः गुरु ने

जहां लोगों को लेकर दयानन्द को आशीर्वाद दिया, वहां उसके साथ ही अपने अभीष्ट मनोरथ को भी प्रकट कर दिया अर्थात् "हे पुत्र व्रत करो कि भारतवर्ष में वैदिक धर्म का प्रचार और वेद विरुद्ध मतों का खण्डन करोगे।"

यह दक्षिणा कितनी कठिन थी। इसको तो पाठक गण मन में ही विचार सकते हैं। इस के लिये तन, मन तथा समस्त जीवन की आवश्यकता थी। वैदिक धर्म सर्वथा लोप हो चला था। वेदानुयायी कहलाने वाले भी बहुत कम थे और जो रह गये थे उनके घर और उनके जीवन सर्वथा वेदों की पुस्तकों और वैदिक भावों से शून्य थे। समस्त संसार अन्य मतों में फंस चुका था। दयानन्द से पहले कई दृढ़ आत्मा व्रत कर चुके थे। कुमारिल भट्ट ने कई सौ वर्ष पहले एक युवती का आर्तनाद सुन कर प्रण किया था कि वह वेदोद्धारक बनेंगे। स्वामी शंकर ने भी अपना समस्त जीवन वेदों के प्रचार में लगाया। परन्तु वेदों का उद्धार न हुआ। दिन प्रतिदिन इसकी क्षीणता ही होती गई।

अब दयानन्द की बारी थी। उनका हृदय कार्य्य की महत्ता को जानता था। वह समझते थे कि ऐसा वृत करने में क्या २ कठिनाइयां पड़ेंगी। परन्तु उनका जीवन आग्नेय जीवन था। उनका हृदय विशाल था। वह धृति के आकर थे। उन्होंने खुले हृदय से संकल्प किया। वस्तुतः धर्म प्रचार का वृत तो बीज रूप से वह उसी समय कर चुके थे जब

घर से निकले। परन्तु अब उनका लक्ष्य अधिक निश्चत हो गया।

गुरु से विदा होकर स्वामी दयानन्द आगरे में आये और वहां दो वर्ष रहे। लक्ष्य निश्चित हो चुका था परन्तु लक्ष्य तक पहुंचने का मार्ग निर्धारित नहीं हुआ था। संभवतः वह सामग्री इकट्ठी कर रहे थे। मन में सोच रहे थे कि किस मार्ग का अवलम्बन किया जाय। सब से अधिक सामग्री जो इस यज्ञ में चाहिये योग साधन है। कहते हैं कि उन्होंने आगरे में रहकर अधिकतर इसी का उपार्जन किया और अठारह अठारह घण्टे तक की समाधि लगाने लगे। यहां वह किसी प्रकार का शास्त्रार्थ या वाद-प्रतिवाद नहीं करते थे। जो पास आ जाता उसके साथ वार्त्तालाप हो जाता था। दो वर्ष के बाद उन्होंने सम्भवतः अपनी शक्ति का परिमाण जानने के लिये देशी रियासतों में भ्रमण किया। पहले ग्वालियर आये और वहां वैष्णव मत का खण्डन करते रहे। इसके पश्चात् करौली और फिर जयपुर चले गये। जयपुर में उन्होंने वैष्णव मतानुयायियों को शास्त्रार्थ में पराजित करके शैव मत का प्रतिपादन किया। यहां इनको अपने मत के स्थापन करने में इतनी सफलता हुई कि राजा से लेकर रंक तक सभी के गले में रुद्राक्ष की मालायें पड़ गईं। कहते हैं कि घोड़ों और हाथियों तक के गले भी रुद्राक्ष की मालाओं से विभूषित हो गये।

स्वामी दयानन्द के जीवन की सब से अद्भुत घटना यही है। क्योंकि इसकी उनके शेष जीवन-वृत्त से संगति नहीं मिलती। स्वभावतः प्रश्न उठता है कि जब उनको प्रसिद्ध पूर्वोक्त शिवरात्रि के दिन शैवमत के विषय में शङ्का हो चुकी थी तो फिर इस प्रौढ़ अवस्था में उन्होंने शैवमत का प्रचार क्यों किया। और यदि किया तो उसके पश्चात् क्यों छोड़ दिया। भिन्न २ महानुभावों ने इस सम्बन्ध में भिन्न २ कल्पनायें की हैं। कोई कहते हैं कि शैवमत के पक्ष में जो शास्त्रार्थ किया था वह केवल शैवमत का तारतम्य वैष्णव मत की अपेक्षा से दिखलाने के लिये किया था। वस्तुतः उनकी उस पर श्रद्धा न थी। कोई कहते हैं कि अपनी शक्ति जांचने के लिये ऐसा किया गया था। परन्तु मुझे यह दोनों बातें निर्मूल मालूम होती हैं। पहली बात तो शास्त्रार्थ के वृत्त से ज्ञात नहीं होती। दूसरी बात स्वामी दयानन्द के शुद्ध और निर्मल चरित्र के सर्वथा विपरीत है। वह सत्य के इतने प्रेमी थे कि उन्होंने सत्य के सामने अपने यश या कीर्त्ति की कभी परवाह नहीं की। अपनी भूलों को स्वीकार कर लेना वह धर्म का पहला सिद्धान्त समझते थे। बड़ी २ सभाओं में जब कभी कोई उनकी भूल पकड़ता तो वह उसे बिना आनाकानी के स्वीकार कर लेते थे। बड़े और प्रभावशाली आदमियों में यह बात बहुत कम पाई जाती है। स्वामी दयानन्द ने "सत्यार्थ प्रकाश" में इस बात को अनेक स्थानों पर लिखा है और आर्य्यसमाज

के दश नियमों में से एक नियम यह रख दिया है कि "सत्य के ग्रहण करने और असत्य के त्यागने में सर्वदा उद्यत रहना चाहिये"। इस विषय में मेरा मत तो यह है कि शिवरात्रि का उद्बोधन केवल बीज मात्र था। उसने विचार सागर में एक कंकड़ी फेंक दी थी। सत्य की खोज के लिये यह एक सूत्र-पात था। तब तक उन्होंने यह निश्चय नहीं किया था कि सत्य क्या है। सिद्धान्त विषयक परिपक्वता उनमें नहीं आयी थी। गुरु विरजानन्द के छः या सात साल के सत्संग से उन्होंने केवल सत्य-अन्वेषण की सामग्री इकट्ठी की थी अधि-कतर तो व्याकरण पर बल दिया था। उनका विश्वास था कि व्याकरण शास्त्र वैदिक सिद्धान्त की कुंजी है उसको एक बार पूर्णतया ग्रहण कर लेने से अन्य बातें सरल और सुलभ हो जाती हैं। "सत्यार्थ प्रकाश" के तृतीय समुल्लास में भी उन्होंने यही अनुमति दी है। अन्य दर्शनों का अध्ययन केवल गौण रीति से था। गुरू विरजानन्द किसी मत विशेष के पक्षपाती न थे। उनसे रंगाचार्य्य से जो शास्त्रार्थ हुआ था वह केवल व्याकरण विषयक था। उन्होंने रंगाचार्य्य के सिद्धान्तों पर कभी आक्षेप नहीं किया था। जयपुराधीश राजारामसिंह से सभा करने की जो प्रार्थना की थी वह भी पाणिनी तथा भट्टोजी दीक्षित के व्याकरणों के ही सम्बन्ध में थी। इसलिये प्रतीत तो यही होता है कि स्वामी दयानन्द ने मथुरा निवास में अपने मूल सिद्धान्त निश्चित

नहीं किये थे। यह वह अवश्य निश्चय कर चुके थे कि सत्य धर्म की खोज करूँ और उसका प्रचार करूँ। परन्तु दो तीन वर्ष के इस भ्रमण और शास्त्रार्थ आदि ने उनके हृदय में शङ्का उत्पन्न कर दी और अब वह शैव धर्म के भी पक्षपाती नहीं रहे। यहां तक कि अजमेर में उन्होंने शैवमत का भी खण्डन किया। एक वार वही जयपुराधीश जिनके घर जाकर स्वामी दयानन्द ने शैवमत की विजय पताका फहराई स्वामी दयानन्द को वृन्दावन ले जाने के लिये आगरे आये। उनका अभिप्राय था कि रंगाचार्य से उनका शास्त्रार्थ हो और शैवमत का महत्व वृन्दावन में भी स्थापित किया जाय। स्वामी दयानन्द ने उनसे निर्भीकता से कह दिया कि मैं शैवमत का पोषक नहीं हूँ।

इस अनिश्चित अवस्था में स्वामी दयानन्द ने फिर गुरु विरजानन्द की शरण लेनी चाही। जिस गुरु से सत्यकी खोज की सामग्री मिली थी वह अवश्य सत्य की खोज में भी सहायता देगा यह स्वामी दयानन्द का अटल विश्वास था। इसलिये उन्होंने फिर मथुरा आकर अपने को गुरु के चरणों में रख दिया और अपने हृदय की शङ्कायें प्रकट् कर दीं। विरजानन्द अपने शिष्य को धर्मारूढ़ देखकर बड़े प्रसन्न हुये। उनको यह जानकर बड़ा आनन्द हुआ कि मेरा शिष्य गुरु दक्षिणा देने के लिये भरसक यत्न कर रहा है। उन्होंने शिष्य की शङ्काओं को निवारण किया। मैं समझता हूँ

कि धर्म के मूल सिद्धान्तों को स्वामी दयानन्द ने इसी समय निश्चित कर लिया था क्योंकि इस समय के पश्चात् फिर वह डाँवा डोल अवस्था नहीं रही। जिस प्रकार विशेषज्ञ चित्रकार चित्र के ऊपर अपनी अन्तिम लेखनी फेर कर उसकी शोभा को कई गुना कर देता है इसी प्रकार गुरु विरजानन्द ने भी अपने अन्तिम उपदेश से स्वामी दयानन्द के हृदय-रूपी हिलते हुये शीशे को स्थिर कर दिया। इसके पश्चात् स्वामी दयानन्द हरिद्वार चले गये। और फिर कभी उनको गुरु-दर्शन का सौभाग्य प्राप्त नहीं हुआ परन्तु यह अवश्य आशा है कि गुरु विरजानन्द का अन्तिम जीवन इस सन्तोष और विश्वास के साथ व्यतीत हुआ होगा कि मैंने अपना काम पूरा कर दिया और जो मेरा उद्देश्य था उसको मेरा शिष्य अवश्य पूर्ण करेगा। इससे उत्तम और स्थायी गुरु-दक्षिणा क्या हो सकती है ?

छठा अध्याय

धुरन्धरों से मुठभेड़

गत अध्याय में लिखा जा चुका है कि स्वामी दयानन्द १८६७ ई० में गुरू विरजानन्द को अन्तिम बार प्रणाम करके हरिद्वार आये। उस समय यहां कुम्भ का मेला था और

समस्त भारतवर्ष के प्रसिद्ध सन्यासी तथा विद्वान एकत्रित थे। इस देश में कुम्भ के समान कोई और मेला नहीं होता। लाखों मनुष्य गंगाजल में डुबकी लगाकर मुक्ति प्राप्त करने के लिये आते हैं। स्वामी दयानन्द ने इस अवसर को अपने कार्य्य के लिये विशेष उपयोगी समझा। एक तो विशेष धर्मज्ञों का एकत्रित होना, दूसरे सब के हृदय में मुक्ति की इच्छा। इससे अधिक धर्म निर्धारण का अवसर ही क्या हो सकता था। हरिद्वार पहुंचते ही उन्होंने एक पर्णकुटी में विश्राम किया और उस के बाहर 'पाखण्ड मर्दन' नाम की पताका लगा दी। पताका को देखकर अनेक साधु सन्यासी तथा विद्वान लोग आते और स्वामी दयानन्द उनको शुद्ध वैदिक धर्म का उपदेश करते थे।

५. परन्तु स्वामी दयानन्द को एक बात देखकर बहुत विस्मय हुआ। क्या साधु, क्या सन्यासी, क्या पंडित, क्या मूर्ख, क्या गृहस्थी, क्या वैरागी सभी को उन्होंने मिथ्या मत मतान्तरों के जाल में फंसा पाया। देखने और कहने को तो वह मुमुक्षु थे परन्तु वस्तुतः उनके हृदय में सांसारिक इच्छायें ही विद्यमान थीं। सत्य की निष्ठा किसी को न थी। असत्य और अनावश्यक प्रथाओं को धर्म समझ रक्खा था। इसलिये धर्म की तलाश भी न थी। सब यही समझते थे कि हम सत्य-पथ पर हैं। जो करते हैं वही ठीक है। यही सनातन धर्म है। इसको छोड़ कर अन्य किसी रीति नीति का

अवलम्बन श्रेय नहीं हैं। इस बात ने स्वामी दयानन्द के हृदय को इतना उदासीन बना दिया कि उनको धर्म प्रचार सर्वथा असम्भव प्रतीत होने लगा। उन्होंनें समझा कि इस असंख्य जनता को ठीक मार्ग पर लाना कठिन ही नहीं किन्तु असम्भव है। अतः उन्होंनें अपनी सब पुस्तकें बांट दी। पास जो सामग्री थी वह भी त्याग दी और योग साधन में निमग्न हो गये। संसार को सुधारने की अभिलाषा पूरित न होते देखकर उन्होंने समझा कि और नहीं तो कम से कम अपनी ही उन्नति में दत्त-चित्त होना चाहिये।

यदि कहीं स्वामी दयानन्द की यह कल्पना स्थायी हो जाती तो आज संसार ही कुछ और होता और जो काम स्वामी दयानन्द के संसार में आने से हुआ वह कुछ न हो सकता। स्वामी दयानन्द से पूर्व अनेकों उच्च कोटि के साधु संसार से विरक्त हो कर योग द्वारा अपनी आत्मोन्नति कर गये, परन्तु उन से किसी अन्य को लाभ न हुआ। दीपक तो जले परन्तु अपने ही को प्रकाश देने के लिये। घर में तो ज्यों का त्यों अन्धेरा ही रहा। अज्ञान-तम दूर न हुआ। ईश्वर दर्शन हुआ तो उनको। मुक्ति हुई तो उनकी, आत्मोन्नति हुई तो उनकी। दूसरों को उन से क्या लाभ। संसार के लिये तो उनका होना न होना बराबर था। परन्तु स्वामी दयानन्द को तो परम प्रभु जगत् नियन्ता ने इसीलिये नहीं भेजा था, उनका तो कार्य्य ही और था।

"परित्राणाय साधूनां विनाशाय दुष्कृतां।
धर्म संस्थापनार्थाय सम्भवामि युगे युगे॥"

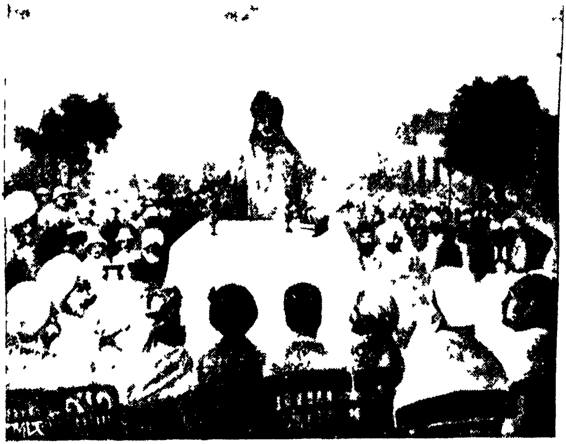
ही उच्च आत्माओं का उद्देश्य होता है। वह आत्मोन्नति के लिये नहीं किन्तु संसारोन्नति के लिये आते हैं। उनका आशय स्वयं मुक्ति पाना नहीं किन्तु दुःखमय जगत को दुःख से मुक्त करना होता है। वह उस रत्न के समान नहीं होते जो कीचड़ में पड़ा पड़ा चमकता रहे किन्तु उनकी तुलना उस स्वच्छ जल से की जा सकती है जो कीचड़ को भी शुद्ध और निर्मल कर देता है।

स्वामी दयानन्द का आत्मा ऐसा ही आत्मा था। एक बार निराशा की राख उनके उत्साह रूपी अग्नि पर आ अवश्य चुकी थी परन्तु वह चिरस्थायी न थी। एक दिन जब वह अपने ध्यान में निमग्न थे किसी व्यक्ति ने उनके निकट आकर भागवत की प्रशंसा और वेदों का अपमान करना आरम्भ किया। स्वामी दयानन्द को यह बात सह्य न हुई। उन्होंने उस आत्मा को ऐसा पाप करते देख कर उसको उससे बचाने का प्रयत्न किया और साथ ही दृढ़ संकल्प भी कर लिया कि चाहे धर्म प्रचार के मार्ग में कितने ही कष्ट क्यों न हों पीछे पग हटाना उचित नहीं है।

हरिद्वार से स्वामी दयानन्द गंगा के किनारे किनारे पूर्व की ओर बढ़े। पहले *कम्पिल में कुछ दिनों निवास किया

* कम्पिल फरुख़ाबाद से १५ कोस पश्चिम की ओर गंगा तट पर है।

और लोगों को गायत्री जाप की महिमा का उपदेश करते रहे। फिर वहां से फ़रुख़ाबाद चले आये। फ़रुख़ाबाद से उस घोर धर्म युद्ध का आरम्भ होता है जो स्वामी दयानन्द को वैदिक धर्म प्रचार के लिये विशेष कर उन्हीं लोगों से करना पड़ा जो अपने को वैदिक धर्म का ही अनुयायी बताते थे। जिस प्रकार शरीर के बाहर रक्खा हुआ विष शरीर को हानि नहीं पहुंचा सकता परन्तु शरीर में प्रविष्ट होकर वही विष मृत्यु का कारण हो जाता है इसी प्रकार आर्य्य जाति को उतना अन्य जातियों ने आघात नहीं पहुंचाया जितना आर्य्य जाति में प्रविष्ट हुई बाधाओं ने पहुंचाया है। पेट में पहुंचकर विष कठिनता से ही दूर होता है। इसी प्रकार वेदानुयायियों के भीतर आई हुई बुराइयों के परिशोधन में स्वामी दयानन्द को बड़ी कठिनाइयां उठानी पड़ीं। जिन धुरन्धरों से सहायता की आशा हो सकती थी उन्होंने विरोध किया, जो वेद रक्षक बने हुये थे उन्होंने वैदिक धर्म की मूल पर कुल्हाड़ा चलाया। जो अपने को आर्य्यजाति के शिरोमणि कहते थे उन्होंने वैदिक सभ्यता के वृक्ष को मठ्ठे से सींचने का दृढ़ सङ्कल्प कर लिया था। स्वामी दयानन्द को भीतर और बाहर, दायें और बायें, सभी ओर से घोर संग्राम करना पड़ा। अधर्म को स्थित रखने और धर्म को न जमने देने में सब से अधिक हाथ स्वार्थ का था। संस्कृत के विद्वान पण्डित समझते थे कि वर्त्तमान अवस्था में ही उनकी स्वार्थ सिद्धि है।



बरेली की उस बड़ी सभा में जहाँ अनेक देशीय और विदेशीय पुरुष उपस्थित थे ऋषि ने व्याख्यान के मध्य में कहा — "लोग कहते हैं 'सत्य को प्रकट न करो, कलक्टर क्रोधित होगा, कमिश्नर अप्रसन्न होगा, गवर्नर पीड़ा देगा' अरे ! चक्रवर्त्ती राजा भी क्यों न अप्रसन्न हो, हम तो सत्य ही कहेंगे।"

उनके अनुयायी मूर्खता के कारण आंखें मीच कर उनके पीछे चलते थे। इस प्रकार स्वार्थ और अज्ञान दोनों मिल-कर धर्म के विरुद्ध कटिबद्ध हो रहे थे और स्वार्थ विशेष कर अज्ञान की सहायता करता था।

फ़रुख़ाबाद आते ही स्वामी दयानन्द ने खुले शब्दों में एक ईश्वर की उपासना का मण्डन और मूर्त्ति पूजा का खण्डन आरम्भ कर दिया। इससे पूर्व उन्होंने मूर्त्तिपूजा के विरुद्ध इतनी ज़ोरदार आवाज़ नहीं उठाई थी। मूर्त्तिपूजा हिन्दू पुजारियों की एक मात्र जीविका थी। यह वह मर्म स्थान था जिस पर आघात पहुंचते ही समस्त शरीर कम्पायमान हो सकता था। हिन्दू-जाति को अपने ऊपर अनेक प्रकार के आघात सह्य थे। किरोड़ों हिन्दू ईसाई और मुसलमान हो चुके थे और पण्डित मण्डल के कान पर जूं तक न रेंगी थीं। लाखों विधवाओं का आर्त-नाद भारतवर्ष की भूमि को कंपा रहा था। किसी विद्वान को तरस न आता था। सती सीता को आदर्श मानने वाली लाखों आर्य्य अवलायें वैश्या बन कर निर्लज्जता का जीवन व्यतीत कर रहीं थीं परन्तु किसी माई के लाल को इसकी परवाह न थी। वेद के पुस्तक भारतवर्ष के बड़े २ नगरों में भी दुष्प्राप्य हो गये थे परन्तु किसी को यह आवश्यकता प्रतीत नहोती थी कि अपनी वर्त्तमान स्थिति में परिवर्त्तन करे। परन्तु एक सन्यासी का मूर्ति पूजा के विरुद्ध उठ खड़ा होना हिन्दू

जाति को सह्य न था। पुजारी और उनके अनुयायी एक स्वर से चिल्ला उठे कि यह क्या हुआ। वस्तुतः धर्म के सभी अङ्ग लुप्त हो गये थे केवल मूर्त्तिपूजा थी जो प्रत्येक की स्थानापन्न बनी हुई थी। संध्या के स्थान में मूर्त्तिपूजा, संस्कारों के स्थान में मूर्त्तिपूजा, हवन के स्थान में मूर्त्तिपूजा, रोगों के निराकरण के लिये औषधि और वैद्य के स्थान में मूर्त्तिपूजा, शत्रु को रण-क्षेत्र से भगाने के लिये सेना और शस्त्र के स्थान में मूर्त्तिपूजा। ऐसी व्यापक और व्याप्त मूर्त्तिपूजा पर आघात पहुंचते ही मृत्यु-प्राय हिन्दू-जाति का भी चौंक कर उठ पड़ना कोई आश्चर्यजनक बात न थी।

फ़रुख़ाबाद में मूर्त्तिपूजा पर आक्रमण देखकर लोग स्वामी दयानन्द के बहुत विरोधी हो गये थे। कई ने तो उनको अपमानित करने या मार डालने तक का प्रयत्न किया। फ़रुख़ाबाद के पण्डितों को इस से पहले ही जागना चाहिये था। स्वामी दयानन्द तो मूर्तिपूजा को हटा कर सत्य सनातन एक ईश्वर की पूजा और वैदिक धर्म का प्रचार करते थे। परन्तु उन से बीसियों वर्ष पहले से फ़रुख़ाबाद के ही निकट ईसाइयों का बड़ा भारी मिशन स्थापित हो चुका था जिसको फ़तहगढ़ मिशन कहते थे। इस मिशन ने सहस्रों हिन्दुओं को जनेऊ और चोटी से वंचित कर दिया था परन्तु पण्डितवर्ग को यह व्यावहारिक बुद्धि न थी कि उस मत का निराकरण करने का प्रयत्न करते। जब स्वामी दयानन्द के घोर परिश्रम और

प्रभावशाली व्याख्यानों ने बहुत से फ़रुख़ाबाद निवासियों को आकर्षित किया और कई सज्जनों ने अपने घर की मूर्त्तियां उठा कर गंगा में बहा दीं, तो लोगों में बड़ी खलबली मची। परन्तु सौभाग्य का स्थान है कि अत्याचारियों का कोई उपाय सफल न हुआ। ज्योतिर्मय दयानन्द के सन्मुख आते ही लोग डर जाते थे। फ़रुख़ाबाद के कुछ धनी वैश्यों ने धन व्यय कर के मूर्त्तिपूजा की रक्षा करनी चाही। उन्होंने काशी को आदमी भेजे जो धन देकर वहां के पण्डितों से मूर्त्तिपूजा के पक्ष में व्यवस्था ले आयें। उन बिचारों को क्या मालूम था कि स्वामी दयानन्द की अटूट्य और न्याय संगत युक्तियां धन के द्वारा खण्डित नहीं हो सकतीं। काशी की व्यवस्था को देखकर ही स्वामी दयानन्द को ज्ञात हो गया था कि लक्ष्मी ने सरस्वती पर विजय पाली है और सरस्वती के उपासक लक्ष्मी पा- प्रतिष्ठा के लिये अपनी उपास्यादेवी का तिरस्कार करने में नहीं चूकते। रुपये की झनकार शास्त्रों के वचनों को उलथ पलथ कर देने के लिये पर्य्याप्त है। उस समय स्वामी दयानन्द ने काशी के पाण्डित्य की भी जांच करली थी और उनका दृढ़ सङ्कल्प हो गया था कि काशी चलकर मूर्त्तिपूजा के गढ़ पर आक्रमण करना वैदिक धर्म प्रचार के लिये अत्यावश्यक है।

स्वामी दयानन्द को यह भी विश्वास हो गया था कि पण्डित मण्डल में अनार्ष ग्रन्थों के लिये मान और आर्ष ग्रन्थों की ओर उपेक्षा है। धर्म की अवनति का मुख्य कारण यही

था। इसके निराकरण के लिये उन्होंने वैदिक पाठशाला की नींव डाली जहां पाणिनि मुनि का व्याकरण और अन्य आर्ष ग्रन्थ पढ़ाये जाने लगे। स्वामी दयानन्द ने इस प्रकार की पाठशालायें छलेसर, कासगंज और मिर्ज़ापुर आदि स्थानों में भी खोली थीं परन्तु कुछ दिन के पश्चात् उचित अध्यापकों का प्रबन्ध न होने के कारण इनको बन्द करना पड़ा क्योंकि जो अध्यापक मिलते थे वह अनार्ष ग्रन्थों के पढ़े हुये ही मिलते थे और वह छात्रों को अपने मिश्रित विचारों का ही पाठ पढ़ाते थे जिससे लाभ के स्थान में हानि की अधिक सम्भावना थी।

स्वामी दयानन्द फ़रुखाबाद से रामगढ़ आये। वहां भी उनके प्राणों पर आक्रमण हुआ परन्तु कोई दुष्परिणाम न निकला। फिर वह फ़रुखाबाद चले गये और केवल पाठशाला के प्रबन्ध में ही दत्तचित्त रहे। इसके पश्चात् कानपुर होते हुये प्रयाग आये।

प्रयाग के पश्चात् काशी की बारी आई। हम ऊपर संकेत कर चुके हैं कि काशी मूर्त्तिपूजा का गढ़ है। कई अंशों में तो काशी हिन्दू सभ्यता का केन्द्र समझा जाता है। स्वामी दयानन्द काशी में १८६९ ई० में आये थे। गत दो वर्ष के प्रचार तथा भ्रमण से स्वामी दयानन्द ने अनुभव कर लिया था कि समस्त भारतवासी काशी का मान करते हैं। एक समय वस्तुतः काशी वैदिक विद्या का केन्द्र था। संस्कृत भाषा का प्रचार तो काशी में अब भी संसार भर से अधिक है। यद्यपि

बहुतों की दृष्टि में संस्कृत मृत भाषा समझी जाती है तथापि काशी की गलियों में अब भी पण्डित वर्ग संस्कृत में इसी प्रकार बात चीत करते हैं मानों यह उनकी मातृभाषा है। भेद केवल इतना है कि पहले काशी में सरस्वती की उपासना होती थी। उसके उपासक अपने उपास्य देव की भक्ति का संसार भर में प्रचार करते थे। विद्यारूपी प्रकाश की किरणें काशी रूपी सूर्य्य से निकल कर समस्त संसार के कोने कोने को प्रकाशित करती थीं। परन्तु आज काशी सरस्वती का जेल खाना है। यहां विद्या देवी क़ैद पड़ी हुई है। पण्डित लोग उसके जेलर बने हुये हैं। उनका यही काम है कि वह अन्येां को संस्कृताध्ययन से वंचित रक्खे। यह शूद्र है अतएव वेद का अनाधिकारी है; यह स्त्री है अतः वेद नहीं पढ़ सकती; अमुक ब्राह्मण नहीं इसलिये इसको पढ़ाने से पाप होता है; अमुक नीच ब्राह्मण है इस लिये इसको सरस्वती-उपासना का अधिकार नहीं दिया जा सकता; ऐसी ऐसी अनेक बातें काशी में प्रचलित हैं। यही कारण है कि संस्कृत विद्या का प्रचार समस्त जगत से सकुड़ते सकुड़ते केवल काशी या अन्य दो चार स्थानों तक ही परिमित रह गया है। तब भी काशी का मान हिन्दूजाति की दृष्टि में बहुत है। काशी का पढ़ा हुआ होना ही पण्डित होने की कसौटी है। जो मनुष्य झूठ मूठ भी कह देता है कि मैं काशी का पढ़ा हुआ हूँ उसके आगे लोगों के शिर झुक जाते हैं।

यही कारण था कि स्वामी दयानन्द ने काशी में आकर पण्डितों को समझाने का प्रयत्न किया। और दुर्गाकुण्ड के समीप आनन्द बाग़ में ठहरे।

"दयानन्द के आगमन पर काशी में आन्दोलन मच गया। एक कोपीनधारी सन्यासी ऋग्वेदादि ग्रन्थों की आलोचना करके मूर्त्तिपूजा का मिथ्यात्व प्रतिपादित करता हैं, शाक्त शैवादि सम्प्रदायों की असारता प्रतिपादन करते हैं, माला-ग्रहण और त्रिपुण्ड धारणादि वाह्य अनुष्ठान समूह को वेदविरुद्ध प्रतिपादन करने के निमित्त बद्धपरिकर हुए हैं; और इसी प्रकार और इसी भाव से अपने मत का प्रचार करते २ गङ्गातीरवर्त्ती स्थानों में भ्रमण करते हुए अब वाराणसी नगर में आकर वैदिक धर्म की विजयपताका उत्तेजित की है—यह बात काशी में सर्वत्र ही शीघ्रता के साथ फैल गई। यह संवाद सुनकर काशी के निवासियों में किन्हीं ने विस्मय प्रकाशित किया, कोई विचलित हो गये, शास्त्रिगण चिन्ता करने लगे, धर्म व्यवसायी पण्डे पुरोहितगण नाना प्रकार से अशान्ति और आशङ्काओं की कथायें उत्थापित करने लगे, और कोई कोई व्यक्ति उपेक्षा के साथ उपहास करके बातों में उड़ाने की चेष्टा करने लगे। फलतः इस बात से काशी के मन्दिरों में, सन्तों और साधुओं के निवासों में आन्दोलन मच गया। पदस्थ लोगों की बैठकों और विश्राम क्षेत्रों में इस सम्बन्ध में नाना प्रकार की आलोचना होने लगी।

सारांश यह कि उपस्थित विषय पर वहां के प्रायः सब ही लोगों के हृदय में एक कौतूहल की शिखा उद्दीपित हो गई। 'मूर्त्ति-उपासना सचमुच वेदानुमोदित है या नहीं, सौर-शक्ति प्रभृति साम्प्रदायिक मत वास्तव में वेद विरोधी हैं या नहीं यह जानने के लिये अनेक लोग इच्छुक हुये। यहां तक कि कोई २ अनुसन्धित्सु पण्डित वेद ग्रन्थ लेकर विचार करने बैठ गये। अन्त में यह संवाद काशी नरेश के भी कर्णगोचर हुआ।"

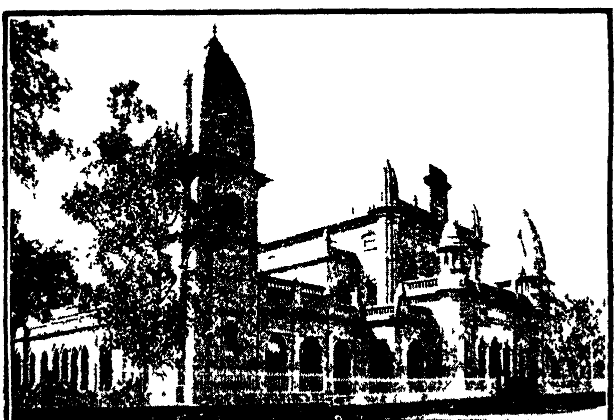
"दयानन्द ने वैदिक धर्म की प्रतिष्ठा के लिये विज्ञापन प्रचारित किया, मूर्त्तिपूजा के खण्डन के विषय में काशीस्थ पण्डित मण्डली के साथ विचारार्थ हुए; अधिक क्या उन्होंने स्वयं ही पण्डितों को विचार के लिये आहूत किया। ऐसी दशा में कुछ न बोलकर चुप हो रहना काशी वासियों के लिये किसी अंश में भी विधेय नहीं था। विशेषतः काशी धाम एक पवित्र धाम करके प्रसिद्ध है। काशी की पवित्रता अथवा काशी की मान महिमा सब ही विश्वनाथादि देव मूर्त्तियों के ऊपर निर्भर है। यदि दयानन्द सरस्वती वाराणसी की छाती पर बैठकर देवमूर्त्ति समूह को मिथ्या प्रमाणित करें, तो एक ओर जैसे देवगण असम्मानित होंगे, वैसे ही दूसरी ओर काशी भी माहात्म्यहीन हो जायगी। ऐसी अवस्था में कुछ न करके निश्चेष्टता का अवलम्बन करना किसी प्रकार भी कर्त्तव्य नहीं था। और भी एक बात थी। काशी के सम्मान से काशी नरेश सम्मानित हैं। काशी के असम्मान से काशी

नरेश असम्मानित हैं। इसलिये काशी की सम्मान रक्षा काशी नरेश को भी आवश्यक हुई। इस सब विषय को धीर भाव से चिन्तन करके काशीराज ने पण्डित मण्डली से परामर्श किया और उस के अनुसार काशीस्थ पण्डित वर्ग को निमंत्रित करके उपस्थित विषय में कर्त्तव्य निर्धारण के निमित्त उनके साथ अलोचना करने लगे। अन्त को दयानन्द सरस्वती के साथ शास्त्रविचार करना ही सब की सम्मति में विहित है यह स्थिर हुआ।" (पृ० १६६)

१७ वीं नवम्बर १८६९ अर्थात् कार्तिक सुदि १२ सम्वत् १९२६ मङ्गलवार को दोपहर के तीन बजे शास्त्रार्थ का समय नियत हुआ। महाराज काशी नरेश ने सभापति का पद ग्रहण किया। पं० ताराचरण तर्करत्न, स्वामी विशुद्धानन्द, पं० बालशास्त्री तथा अनेक पण्डित वर्ग अपने अनुयायियों सहित आनन्द बाग में उपस्थित हुये। शास्त्रार्थ जिस प्रकार से हुआ, उसका वर्णन करना यहां संभव नहीं है। केवल यही कह सकते हैं कि काशी की विद्वन्मण्डली और काशी-वालों की सभ्यता पर यह एक अमिट धब्बा है।



गुरुकुल काङ्गड़ी । [देखो पृष्ठ १३४]



दयानन्द-एंग्लो-वैदिक कालिज, लाहौर । [देखो पृष्ठ १३२]

सातवाँ अध्याय

आर्य्य समाज की स्थापना

शास्त्रार्थ समाप्त हो गया। काशी के पंडितों ने विज्ञापन द्वारा सूचना दी कि स्वामी दयानन्द पराजित हो गये। इसी उद्देश्य के लिये "दयानन्द पराभूति" और "दुर्जन मत मर्दन" नामक पुस्तकें भी प्रकाशित कीं। परन्तु विचारशील पुरुषों को शान्ति न हुई। जो लोग शास्त्रार्थ में इसलिये आये थे कि स्वामी दयानन्द की आवाज़ को येन केन प्रकारेण बन्द करदें उन्होंने तेा यह समझा कि भारतवर्ष में इस बात की घेाषणा होते ही कि काशी में स्वामी दयानन्द पराजित हो गये फिर मूर्तिपूजा का प्रवाह यथापूर्व बह निकलेगा। परन्तु कुछ ऐसे भी पुरुष थे जिनका मुख्य प्रयेाजन सचाई की खोज थी। ऐसे पुरुषों को बड़ी निराशा हुई। उनको विश्वास हो गया कि काशी की समस्त पंडित-मंडली स्वामी दयानन्द के आक्षेपों का उत्तर नहीं दे सकी और इसलिये कोलाहल करके उठ खड़ी हुई। पायनियर, (The Pioneer) हिन्दू पैट्रियट (The Hindu Patriot) क्रिश्चियन इंटेलीजेन्सर (The Christian Intelligencer) आदि अंगरेज़ी पत्रों ने स्वामी दयानन्द की बड़ी प्रशंसा की। शास्त्रार्थ के दूसरे दिन श्रीयुत चन्द्रशेखर सेन बेरिष्टर से स्वामी दयानन्द ने स्वयं कहा कि मैं परास्त नहीं

हुआ। उनके एक फ़रुख़ाबादी भक्त रईस पन्नालाल इसी बात का अनुसंधान करने के लिये काशी आये थे कि स्वामी दयानन्द परास्त हुये या नहीं। उनको भी स्थानिक अन्वेषण से यही विदित हुआ कि स्वामी दयानन्द पराजित नहीं हुये। शास्त्रार्थ ने स्वामी दयानन्द को भी विश्वास करा दिया कि मूर्तिपूजा के प्रसिद्ध गढ़ काशी में भी धुरन्धर पंडितों के पास मूर्तिपूजा के पक्ष में कोलाहल से भिन्न कोई युक्ति उपस्थित नहीं है।

स्वामी दयानन्द काशी में चार मास के लगभग रहे। उनकी इच्छा थी कि यहाँ एक वैदिक पाठशाला खोलूँ। इसके पश्चात् वह प्रयाग चले गये। उस समय प्रयाग में कुम्भ का मेला था (जनवरी १८७० में)। और स्वामीजी के लिये प्रचार का बहुत अच्छा अवसर था। लाखों मनुष्य उनके उपदेशों को सुनते थे और मूर्तिपूजा-खण्डन पर आश्चर्य करते थे। इससे पूर्व लोगों ने सिवाय विधर्मियों के किसी वैदिक धर्मी के मुख से ऐसी बात न सुनी थी। कुम्भ प्रचार के पश्चात् मिर्ज़ापुर आदि होते हुये स्वामी दयानन्द मई १८७० में फिर बनारस पहुँचे और पण्डितों को शास्त्रार्थ के लिये बुलाया। परन्तु काशी के पण्डित स्वामी दयानन्द के गम्भीर पाण्डित्य तथा अपने खुखलेपन को पहले ही जान चुके थे। अब की बार लोग भी अधिक चतुर होगये थे। यदि फिर शास्त्रार्थ होता तो अवश्य गोलमाल और कोलाहल का

पूर्ववत् अवसर न मिलता और बातचीत अधिक ढंग की होती। काशी के पण्डित अपनी स्थिति को भली प्रकार समझते थे इसलिये उन्होंने चुप ही साधना अच्छा समझा जिससे उनके अन्ध विश्वासी अनुयायियों ही में कुछ न कुछ गौरव बना रहे। परन्तु यह गौरव कुछ वास्तविक गौरव न था। स्वामी दयानन्द को जब अवकाश मिलता तो काशी में आ कूदते और विज्ञापन पर विज्ञापन देते कि यदि इतने दिनों की खोज के पश्चात् भी मूर्त्तिपूजा के पक्ष में कोई वैदिक प्रमाण मिल गया हो तो सामने रक्खो। परन्तु अब कौन आता था। आरम्भ से लेकर अन्त तक स्वामी दयानन्द ने सात बार मूर्त्तिपूजा के गढ़ काशी पर आक्रमण किया और उसकी जड़ों तक को ऐसा हिला दिया कि पण्डित मंडल के कुछ बनाये न बनी।

इसी बीच में कासगंज, छलेसर, मिर्ज़ापुर आदि में वैदिक पाठशालाएं खोली गई और अधिक समय इन्हीं के प्रबन्ध में व्यतीत हुआ। परन्तु १८७२ ई० में बङ्गाल की बारी आई। स्वामी दयानन्द की इच्छा थी कि भारतवर्ष की राजधानी कलकत्ता नगर के बङ्गवासी पण्डितों के सम्मुख भी सत्य का संदेश उपस्थित करना चाहिये। इसलिये वह पटना मुंगेर आदि होते हुये दिसम्बर १८७२ में कलकत्ते पहुँचे।

कलकत्ते में उस समय ब्रह्म समाज का बहुत प्रचार था, श्री महर्षि देवेन्द्रनाथ जी ठक्कुर तथा बाबू केशवचन्द्र सेन ब्रह्म-

समाज के नेताओं में थे। यहाँ केवल इतना ही कहना पर्य्याप्त है कि ब्रह्म समाजी लोग मूर्त्तिपूजा के विरोधी थे। इनमें स्वतंत्रता अधिक थी और किसी २ में तो यह स्वतंत्रता उच्छृङ्खलता की सीमा को पहुँच गई थी। स्वामी दयानन्द जहाँ पौराणिकों की मिथ्या गोलमाल के विरुद्ध थे वहाँ वैदिक धर्म से हटना नहीं चाहते थे। ब्रह्म समाज के लोग वैदिक धर्म पर विश्वास नहीं रखते थे। स्वामी दयानन्द और ब्रह्म समाज के नेताओं में एक विचित्र भेद और था। स्वामी दयानन्द के स्वतंत्र विचार भी वेदों से स्वतंत्र न थे। वह ईश्वर की आज्ञा को सर्वोपरि समझते थे और वेद को ईश्वर आज्ञा जानते थे। यदि उन्होंने मूर्त्तिपूजा का खण्डन किया तो इसलिये कि वेदों तथा प्राचीन ऋषियों के सिद्धान्तों के विरुद्ध है। परन्तु ब्रह्मसमाज पर पाश्चात्य साहित्य का अधिक प्रभाव था। उनको वस्तुतः ईसाई मत के प्रभाव ने ही मूर्त्तिपूजा के विरुद्ध किया था। वह ईसाई न थे परन्तु ईसाइयत से प्रभावित अवश्य थे। स्वामी दयानन्द को अपने कई सिद्धान्तों की पुष्टि करते देखकर ब्रह्म समाजियों ने उनका बहुत सत्कार किया। प्रत्येक बड़े बड़े स्थान पर व्याख्यान हुये सभी बड़े आदमियों से भेंट हुई। बाबू केशवचन्द्र सेन से अधिक प्रेम हो गया। परन्तु स्वामी दयानन्द न तो सहसा इन लोगों के मन्तव्यों को बदल सके और न स्वयं अपने विचारों में परिवर्त्तन कर सके। कलकत्ते में

स्वामी दयानन्द के शास्त्रार्थ भी हुये जिनसे उनकी धाक जम गई। स्वयं केशव बाबू से भी अनेक विषयों पर वार्त्तालाप हुआ। "आवागमन" विषय पर उनके साथ शास्त्रार्थ भी हुआ (जिसका हाल कहीं छपा नहीं मिलता) परन्तु स्वामी दयानन्द को बङ्गाल की उर्वरा भूमि भी अपने काम के लिये मरुभूमि से अधिक प्रतीत न हुई। स्वामी दयानन्द कलकत्ते में लगभग तीन मास रहे और बङ्गालियों की प्रकृति का भली भांति निरीक्षण किया। परन्तु अधिक रहना अनुपयोगी समझकर १ ली अप्रेल १८७३ को हुगली चले आये। और १५ दिन वहाँ रह कर पश्चिम की ओर प्रस्थान कर दिया। केशव बाबू के सत्संग से स्वामी दयानन्द ने अपने प्रचार में एक परिवर्त्तन कर दिया जिस से देश और जाति को विशेष लाभ हुआ। स्वामी दयानन्द कलकत्ते जाने तक केवल संस्कृत ही बोलते थे। उनके व्याख्यान भी संस्कृत में ही होते थे। यद्यपि संस्कृत अत्यन्त सरल और मनोहारिणी होती थी और प्रायः सुशिक्षित जनता उससे स्वामी दयानन्द का आशय समझ ही लेती थी तथापि सर्वसाधारण उससे इतना लाभ नहीं उठा सकते थे जितना होना चाहिये था। इसमें सन्देह नहीं कि स्वामी दयानन्द का संस्कृत भाषा पर पूर्ण आधिपत्य प्राप्त था। लोग उनकी मधुर बाणी को सुन कर मुग्ध हो जाते थे। भले भले संस्कृतज्ञ और पाण्डित्य पूर्ण विचक्षण उनकी संस्कृत का लोहा मान गये थे।

काशी के व्याकरणाभिमानी पंडितों को उन्होंने व्याकरण में भी पराभूत कर दिया था। कलकत्ते में कई विद्वान उनकी सरल संस्कृत को सुनकर आश्चर्य करते थे। तो भी एक और दृष्टि से देखा जाय तो स्वामी दयानन्द के केवल संस्कृत बोलने से एक बहुत बड़ी हानि थी। स्वामी दयानन्द का उद्देश्य अपने पाण्डित्य को प्रकाशित करना न था किन्तु अपने वैदिक धर्म सम्बन्धी संदेशों को मनुष्य मात्र तक पहुँचा देना उनका एकमात्र कर्त्तव्य था। जिस भाषा का वह प्रयोग करते थे वह सर्वसाधारण की भाषा न थी। अतः समझने में कभी २ भेद हो जाता था। एक दो बार तो ऐसा भी हुआ कि किसी संस्कृतज्ञ से स्वामी जी के व्याख्यानों का उलथा करने के लिये कहा गया तो उसने जनता को कुछ का कुछ समझाने की कोशिश की जिससे स्वामी दयानन्द को खेद हुआ। केशव बाबू ने प्रार्थना की कि आप आर्य्य भाषा का प्रयोग किया करें क्योंकि केवल संस्कृत बोलने से जनता में भ्रम फैलता है। स्वामी दयानन्द सत्य को ग्रहण करने और असत्य को त्यागने के लिये सदा उद्यत रहते थे। उन्होंने झट इस लाभदायक प्रस्ताव को स्वीकार कर लिया। और कलकत्ते से ही भाषा बोलने लगे।

आज स्वामी दयानन्द को कलकत्ते छोड़े ५० वर्ष हो चुके। इस समय में स्वामी दयानन्द के उद्देश्यों का प्रचार चारों ओर फल चुका है परन्तु इसके सब से कम चिह्न

बङ्गाल में ही दृष्ट पड़ते हैं। यद्यपि कलकत्ते में बड़ा विशाल आर्य्यसमाज मन्दिर और बड़ा महत्वपूर्ण समाज उपस्थित है तथापि असली बङ्गवासियों में आर्य्य समाज के प्रचार का सर्वथा अभाव है। इसका मुख्य कारण एक है। बङ्गवासी स्वभाव से ही देश और जाति के प्रेमी हैं। उनमें इस प्रेम की मात्रा सीमा से बाहर चली गई है। उनके आन्तरिक जीवन पर दृष्टिपात करने से पता चलता है कि वह एक बङ्गाली की कही हुई बात को अन्य की अपेक्षा शीघ्र ही मान लेते हैं। वह बंगाली से इतर अन्य पुरुष को गुरु बनाने या मानने के लिये सहसा तैय्यार नहीं होते। यही कारण है कि वहाँ ब्रह्म समाज का अधिक प्रचार रहा। यदि स्वामी दयानन्द बंगवासी होते तो अवश्य ही अब तक बंगाल के कोने २ में आर्य्यसमाज की घोषणा पहुँच चुकी होती। बंगवासियों का यह प्रान्तिक प्रेम जहाँ अनेक बातों में उनके लिये उपयोगी है वहाँ उसने वैदिक धर्म के दूर रखने में भी उनकी सहायता की है। यह एक ऐसी क्षति है जो उनके अन्य लाभों पर पानी फेर देती है। बङ्गालियों में प्रचार कम होने के दो और भी कारण हैं। वहाँ अंगरेज़ी का प्रभाव बहुत दिनों से चला आता है। इसके साथ ही वहाँ के लोग जादू, टोना, भूत प्रेत आदि मिथ्या बातों में बहुत फँसे हुये हैं। बङ्गाले का जादू तो पाश्चात्य प्रान्तों में एक प्रसिद्ध बात है। इसलिये बङ्गवासियों में दो विचित्र भेद हो गये हैं एक तो वह कक्षा है जो पूर्ण-

रीत्या पाश्चात्य सभ्यता से प्रभावित हो चुकी है उसने धर्म कर्म आदि से सर्वथा मुख मोड़ रक्खा है। इस कक्षा की स्वतंत्रता की कोई मर्य्यादा ही नहीं रही। खान पान रहन सहन सभी बातों में यूरोप का अनुकरण होता है। बङ्गालियों में ऐसे हिन्दू मिलते हैं जिनको गो मांस से भी घृणा नहीं है। परन्तु इनके साथ ही वहाँ एक पुरानी कट्टर कक्षा के लोग भी हैं जो अपने मार्ग से एक इंच हटने के लिये तैय्यार नहीं हैं। वह जो करते आये हैं अथवा जो मानते आये हैं उसी को करते और मानते हैं। चाहे सत्य हो चाहे असत्य, यही कारण है कि बङ्गालियों ने स्वामी दयानन्द के मिशन का सत्कार करते हुये भी उसकी पूर्त्ति की ओर पग नहीं बढ़ाया। संभवतः स्वामी दयानन्द ने इन सब बातों का अनुभव किया होगा। कदाचित् इसीलिये स्वामी दयानन्द अपने शेष जीवन में फिर उस ओर न गये।

१५ अप्रेल सन् १८७३ से अक्टूबर सन् १८७४ तक लगभग डेढ़ वर्ष स्वामी दयानन्द केवल बिहार और पश्चिमोत्तर देश (जिसे अब संयुक्तप्रांत कहते हैं) में ही रहे। अधिक समय प्रचार, शास्त्रार्थ तथा वैदिक पाठशालाओं के प्रबन्ध में ही व्यतीत हुआ। इसके पश्चात् उन्होंने दक्षिण की ओर आँख उठाई। और जबलपुर होते हुये २६ अक्टूबर सन् १८७४ को बम्बई पहुँचे।

बम्बई में बल्लभाचार्य्य और नारायण मत का बहुत

प्रचार था। स्वामी दयानन्द ने बम्बई पहुँचते ही एक विज्ञापन निकाला जिसकी चार भाषाओं में सहस्रों प्रतियाँ छपवा कर बम्बई के कोने कोने और गली गली में बाँट दी गई। बम्बई निवासी स्वामी दयानन्द को भिन्न २ दृष्टि से देखने लगे। नित्यप्रति व्याख्यान होते, जो आता उससे शास्त्रार्थ करते और शंका समाधान करके लोगों की शंकायें निवारण किया करते थे। परन्तु सब से बड़ा और प्रभावशाली कार्य्य आर्य्य समाज की स्थापना थी जिसने वैदिक धर्म प्रचार की जड़ों को पाताल तक पहुँचा दिया।

स्वामी दयानन्द ने इससे पहले वैदिक पाठशालाओं को प्रचार का साधन समझा था। वह समझते थे कि इन पाठशालाओं से जो लड़के निकलेंगे वह वैदिक धर्म पर आरूढ़ होंगे और वही मेरे संदेस को मेरे पीछे लोगों में फैलायेंगे। परन्तु इसमें उनको कृतकार्य्यता प्राप्त न हुई। वैदिक पाठशालाओं में अध्यापक वही होते थे जिन्होंने पौराणिक प्रभाव में शिक्षा प्राप्त की थी। स्वामी दयानन्द के दो चार व्याख्यान सुनकर उनके पुराने संस्कार बिल्कुल निकल नहीं गये थे। फिर स्वामी जी के शिर पर देश भर में फिरने, शास्त्रार्थ करने और विरोधियों को उत्तर देने का भी भार था, अतः वह पाठशालाओं का स्वयं प्रबंध नहीं कर सकते थे। व्यय के लिये चन्दा एकत्रित करना पड़ता था जो एक साधारण बात न थी। इन सब कठिनाइयों के अतिरिक्त सब से बड़ी

निराशा-युक्त और खेदजनक बात यह थी कि बालकों की शिक्षा उसी पौराणिक रीति से होती थी जिसको जड़ से हटाना स्वामी दयानन्द के जीवन का मुख्य उद्देश्य था। अतः स्वामी दयानन्द इस चिन्ता में थे कि किसी ऐसी संस्था की नींव डालनी चाहिये जो उत्तम रूप से वेद प्रचार का कार्य्य कर सके।

स्वामी दयानन्द को उस समय दो संस्थायें सुधार का कार्य्य करती हुई दिखाई दीं। एक का नाम ब्रह्म समाज है जो बङ्गाल में कार्य्य कर रहा था। लगभग उसी प्रकार का कार्य्य बम्बई प्रान्त का प्रार्थनासमाज कर रहा था। इन दोनों के मुख्य उद्देश्य यह थे कि हिन्दू जाति (वास्तविक आर्य्य जाति) में जो दोष आगये थे उनका निवारण किया जाय। ब्रह्म समाज के संस्थापक राजा राममोहन राय महोदय मूर्त्तिपूजा के विरुद्ध थे। इसी प्रकार प्रार्थनासमाज के संस्थापकों को वल्लभाचार्य्य आदि के मतों से घृणा हो गई थी। वह इन मतों को जाति के लिये मृत्यु का कारण समझने लग गये थे। इन दोनों समाजों के नेताओं ने स्वामी दयानन्द का स्वागत किया था क्योंकि वह समझते थे कि स्वामी दयानन्द भी उसी प्रकार का कार्य्य कर रहे हैं। वस्तुतः कई अंशों में तो स्वामी दयानन्द के कार्य्य और इन दोनों समाजों के कार्य्य में सादृश्य था। अर्थात् सुधार की इच्छा समान रीति से प्रबल थी। परन्तु भेद भी बहुत था। यह तो सभी मानते थे कि आर्य्य

जाति रोग युक्त है। परन्तु रोग के निदान और औषध में बड़ा मत भेद था। स्वामी दयानन्द ने बहुत यत्न किया कि बंगाल के बाबू केशवचन्द्र सेन और महर्षि देवेन्द्रनाथ जी आदि पर वेदों का महत्व प्रकट करें परन्तु वहाँ निराशा हुई। जब बम्बई में आये और वहाँ से अहमदाबाद गये तो प्रार्थनासमाज के नेताओं राउबहादुर भोलानाथ साराभाई तथा राउसाहब महीपतिराम रूपराम से सुधार विषय में बहुत वार्त्तालाप हुआ। स्वामी दयानन्द के हृदय में यह बात जमी हुई थी कि आर्य्य जाति के अधोपतन का मुख्य कारण वेद मार्ग से विचलित होना है। अतः जब तक आर्य्य जाति फिर वेदों का अवलम्बन न करेगी उस समय तक सुधार होना ही असम्भव है। परन्तु ब्रह्मसमाज और प्रार्थना समाज वेदों को वह गौरव देने के लिये उद्यत न थे। बम्बई में ही स्वामी दयानन्द ने यह निश्चित कर लिया था कि एक संस्था खोलनी चाहिये। इसलिये अहमदाबाद पहुँच कर स्वामीजी ने साराभाई और रूपराम महोदयों से प्रस्ताव किया कि प्रार्थनासमाज का नाम बदल कर आर्य्यसमाज रख दिया जाय। उचित भी ऐसा ही था। आर्य्य समाज बड़ा सारगर्भित नाम है। प्रार्थना समाज मनुष्य कर्त्तव्य के केवल एक ही अंग की ओर संकेत करता था। मनुष्य का कर्त्तव्य प्रार्थना अवश्य है परन्तु केवल प्रार्थना ही कर्त्तव्य नहीं है। ईश्वर भक्ति के भी स्तुति, प्रार्थना और उपासना तीन अङ्ग हैं। और मनुष्य का कर्त्तव्य

ईश्वर-भक्ति से आरम्भ होकर मनुष्य मात्र की सेवा करना भी है। सत्य सनातन धर्म के अनुकूल आर्य्य आदर्श मनुष्य का ही नाम है अतः आर्य्यसमाज शब्द जितना गौरव-शाली है उतना दूसरा शब्द नहीं है इसीलिये ऋषि दयानन्द ने आर्य्यसमाज नाम का प्रस्ताव किया था। साराभाई महोदय ने स्वामी जी के इस प्रस्ताव को उपेक्षा की दृष्टि से नहीं देखा किन्तु कहते हैं कि एक दिन रात भर इसी विषय पर सोचते रहे। वेदों को वह भी आदर की दृष्टि से देखते थे परन्तु साथ ही निर्भ्रान्त ईश्वर-ज्ञान मानने के लिये वह तैय्यार न थे। स्वामी दयानन्द उनको बार बार वेदों के अपौरुषेय होने की ओर संकेत करते थे। अन्त को साराभाई महोदय स्वामी दयानन्द के प्रस्ताव को स्वीकृत न कर सके और प्रार्थना समाज जिस गति से बह रहा था उसी गति से बहता रहा।

अब स्वामी दयानन्द को निश्चय हो गया कि न तो वर्त्त-मान संस्थाओं से उनका काम चल सकता है न उन संस्थाओं के मठाधिकारी अपने निर्दिष्ट पक्ष में परिवर्त्तन करने के लिये उद्यत हैं अतः यदि कुछ करना है तो किसी के आश्रय से काम न चलेगा। अतः उन्होंने बम्बई आते ही आर्य्यसमाज की स्थापना कर दी। इस प्रकार बम्बई में पहले आर्य्यसमाज की १८७५ ई० में स्थापना हुई। इसके पश्चात् भारतवर्ष के भिन्न भिन्न स्थानों में आर्य्यसमाज खुल गये। पंजाब में लाहौर आर्य्यसमाज ने विशेष साहस और उत्साह दिख-

लाया और वहाँ के सभासद् अति शीघ्र ही अन्य समाजों के पथ-प्रदर्शक हो गये।

अब स्वामी दयानन्द ने अपना समय समाजों को सुदृढ़ करने और उनके संचालन के लिये वैदिक साहित्य तैय्यार करने में लगाया। अब तक लोग केवल उनके व्याख्यान सुन कर ही आर्य्यसमाज में सम्मिलित हो जाते थे और उनकी अनुपस्थिति में लोगों को ठीक ठीक बातों की व्यवस्था करने में कष्ट होता था। लोग पत्रों द्वारा पूछा करते थे कि अमुक बात वैदिक है या अवैदिक क्योंकि कोई पुस्तक न थी। परन्तु अब स्वामी जी ने निश्चय कर लिया कि ग्रन्थों का निर्माण किया जाय। स्वामी जी के ग्रन्थों की सूची यहाँ दी जाती है:—

(१) सत्यार्थप्रकाश—जिसमें वैदिक सिद्धान्तों पर १६ व्याख्यान हैं। यह बहुत बड़ा पुस्तक है।

(२) संस्कार विधि—जिसमें मनुष्य के जीवन के १६ संस्कारों का विधान है।

(३) ऋग्वेदादि भाष्य भूमिका—इसमें वेद विषयक बहुत सी बातों की मीमांसा है।

(४) यजुर्वेद भाष्य।

(५) ऋग्वेद भाष्य जो सातवें मण्डल तक ही हो पाया था।

(६) आर्य्याभिविनय—इसमें १०० प्रार्थना मंत्र अर्थ सहित हैं।

(७) पंच महायज्ञविधि—जिसमें संध्या, हवन, बलि-वैश्वदेव, पितृयज्ञ और अतिथि यज्ञ दैनिक कृत्यों की विधि है।

(८) व्यवहार भानु एक छोटी सी पुस्तिका साधारण सदाचार के ऊपर है।

(९) गोकरुणाविधि—एक छोटी सी पुस्तिका पशु रक्षा और गो-रक्षा के विषय में है।

(१०) वेदान्त प्रकाश अर्थात् संस्कृत व्याकरण का एक महत्वपूर्ण ग्रन्थ है जिस में पाणिनि मुनि की अष्टाध्यायी का विषय-क्रम से भाष्य है।

इसके अतिरिक्त कई छोटी छोटी पुस्तकें अन्य मतों की समीक्षा में हैं। इस प्रकार स्वामी दयानन्द ने हिन्दी भाषा में वर्त्तमान लोगों के लाभ के लिये वैदिक धर्म का एक बहुत बड़ा कोष छोड़ा है जिससे हम वैदिक सिद्धान्तों को समझ कर उन पर चलने का उद्योग कर सकते हैं।

ऋषि दयानन्द का देहान्त कार्तिकीय अमावस्या १९४० (दीपावलि) अर्थात् ३० अक्टूबर १८८३ ई० मंगलवार को अजमेर नगर में हुआ। एक मास पूर्व वह जोधपुर में प्रचारार्थ गये थे। वहां उन्होंने जोधपुर नरेश के आचार व्यवहार की कड़ी आलोचना की थी। महाराज ने ऋषि के उपदेश से अपने दुष्कर्म पर पश्चाताप किया। इससे नन्हीं जान नामक एक वेश्या क्रुद्ध हो गई। और उसने षड्यंत्र द्वारा ऋषि के



मुनिवर पं० गुरुदत्त जी विद्यार्थी एम. ए. ।

रसोइये से भोजन में विष मिलवा दिया। यद्यपि विष बहुत कठोर था तो भी स्वामी दयानन्द अपूर्व ब्रह्मचर्य्य के बल से एक मास से अधिक जीवित रहे। यद्यपि उनको अतीसार लग गये थे और अनेक प्रकार के कष्ट थे तब भी वह उनका सहन भीषण रूप से करते थे। जोधपुर से आबू और आबू से अजमेर इलाज के लिये आये परन्तु कुछ औषध काम न कर सकी। और ऋषि दयानन्द ने १६४० की दीपावलि के दिन ६ बजे सायंकाल वेद मंत्र पढ़ते हुये नश्वर शरीर को त्याग दिया।

श्री पं० गुरुदत्त जी पंजाब निवासी मृत्यु के समय वहाँ उपस्थित थे। उनको ईश्वर-अस्तित्व में अनेक शंकायें थीं परन्तु ऋषि की मृत्यु के दृश्य और ऋषि के अटल ईश्वर-प्रेम ने पं० जी को नास्तिक से आस्तिक बना दिया और उन्होंने अपनी शेष आयु ऋषि का ऋण चुकाने में ही व्यय कर दी। ऋषि वैदिक प्रचार का काम आर्य्य समाजियों के सुपिर्द कर गये हैं। यह हम पर उनका ऋण है। ईश्वर इसके चुकाने में हमारी सहायता करें।

दूसरा भाग

आर्य्यसमाज के सिद्धान्त

पहला अध्याय

ईश्वर, जीव, प्रकृति

जब मनुष्य आँख खोलकर देखता है तो सब से पहला प्रश्न उसके मन में यह उठता है कि मैं कौन हूं ? कहां से आया हूं ? कहां जाऊंगा ? यह संसार क्या है ? किसने बनाया है ? इत्यादि। धर्म या मज़हब के सिद्धान्त वस्तुतः इन्हीं प्रश्नों के उत्तर होते हैं। किसी धर्म की सत्यता की कसौटी इन्हीं प्रश्नों के उत्तर हैं। यदि उत्तर युक्ति-युक्त हैं तो वह धर्म भी सब के माननीय हैं। यदि ऊटपटांग हैं, यदि प्रश्नों का कोई सन्तोषजनक समाधान नहीं है तो उस धर्म के मनुष्य-हितकारी होने में बड़ा सन्देह है। आजकल जितने बड़े २ मज़हब या धर्म प्रसिद्ध हैं अर्थात् ईसाई, इस्लाम, बौद्ध, वैदिक आदि वह इन प्रश्नों के भिन्न २ उत्तर देते हैं। इसी कारण उनमें भेद है। वस्तुतः धार्मिक आचार अनाचार का निर्भर भी इन्हीं प्रश्नों के उत्तर पर है। "मनुष्य को क्या करना

चाहिये ?" इसका ठीक २ उत्तर दिया ही नहीं जा सकता जब तक यह निश्चित न हो जाय कि मैं क्या हूं ? और मेरा इस संसार में कौन सा स्थान है। कुछ लोग कहते हैं कि "मैं क्या हूं?" इस प्रश्न के झमेले में न पड़कर अपने कर्त्तव्य का पालन करना चाहिये। मनुष्य को इतना समय नहीं है कि " मैं क्या हूं " की खोज में समय व्यर्थ खोता रहे। परन्तु ऐसा कहने वाले यह नहीं समझते कि जब तक मनुष्य को अपने अस्तित्व का ज्ञान नहीं होता वह अपने कर्त्तव्य का भी पालन नहीं कर सकता। जो राजा यह नहीं जानता कि "मैं राजा हूं" वह क्या राज करेगा ? जो गुरु यह नहीं जानता कि "मैं गुरु हूं" वह क्या पढ़ावेगा ? जो माता यह नहीं जानती कि " मैं माता हूं " वह सन्तान का क्या पालन करेगी। इसी प्रकार जो यह नहीं जानता कि " मैं क्या हूं " वह अपने कर्त्तव्यों को भी नहीं पहचान सकता, इसलिये धर्म का पहला लक्षण यह है कि वह "मनुष्य क्या है और उसका संसार की अन्य वस्तुओं से क्या सम्बन्ध है?" इस प्रश्न का यथोचित उत्तर दे।

हम संसार में दो प्रकार के अस्तित्व देखते हैं। एक जड़ और दूसरा चेतन। जड़ वह है जो स्वयं कुछ नहीं कर सकता। चेतन वह है जो जड़ को चलाता है। गाड़ी घोड़े के द्वारा चलती है। गाड़ी में गति तो है परन्तु घोड़े की दी हुई है। वह स्वयं नहीं चल सकती, घोड़ा अपनी इच्छा और

ज्ञान के अनुकूल गाड़ी को चलाता है। इसी प्रकार संसार की समस्त वस्तुयें जड़ और चेतन दो विभागों में विभक्त हो सकती हैं। बहुत से लोगों ने यह दिखलाने की कोशिश की है कि संसार में दो वस्तुयें नहीं किन्तु एक ही है अर्थात् या तो केवल जड़ या केवल चेतन। इस प्रकार इनके दो दल हैं एक केवल चेतनवादी जो जड़ के अस्तित्व का निषेध करते हैं। दूसरे केवल जड़वादी जो चेतन का अस्तित्व नहीं मानते। चेतनवादी कहते हैं कि संसार में जिसको जड़ कहा जाता है वह भी चेतन का ही रूपान्तर है। परन्तु उन्होंने अबतक इस प्रश्न का कोई सन्तोषजनक उत्तर नहीं दिया कि एक चेतन के रूपान्तर क्यों हो जाते हैं। 'एक' से कई कैसे उत्पन्न हो गये और क्यों उत्पन्न हो गये? यह बड़ी टेढ़ी समस्या है। आजकल वेदान्त का मुख्य सिद्धान्त यह माना जाता है कि 'एकं ब्रह्म द्वितीयं नास्ति' अर्थात् ब्रह्म के अतिरिक्त अन्य कोई वस्तु नहीं है। वस्तुतः वेद या वेदान्त का यह सिद्धान्त नहीं है। श्री शंकर स्वामी आदि आचार्यों ने ही इसका प्रचार किया है। परन्तु इन्होंने संसार की उत्पत्ति का यथोचित उत्तर नहीं दिया।

श्री शङ्कराचार्य्य जी महाराज के शारीरिक भाष्य आदि मुख्य ग्रन्थों के देखने से प्रतीत होता है कि उन्होंने सांख्यों, नैय्यायिकों और बौद्धों तथा जैनों के खण्डन में ही अधिक परिश्रम किया है और अनेक स्थलों पर जो आक्षेप उन्होंने

अपने विरोधियों पर लगाये हैं वह उन पर भी लग सकते हैं। इन वेदान्तियों की जिन को प्राचीन वैदिक धर्म से भेद करने के लिये लोग नवीन वेदान्ती भी कहा करते हैं कई शाखाय हैं। परन्तु उन सब का मूल मंत्र यह है:—

श्लोकार्धेन प्रवक्ष्यामि यदुक्तं ग्रन्थ कोटिभिः।
ब्रह्मसत्यं जगन्मिथ्या जीवो ब्रह्मैव नापरः॥

अर्थात् (१) ब्रह्म सत्य है (२) जगत् मिथ्या है (३) जीव ब्रह्म ही है। जीव और ब्रह्म में कुछ भेद नहीं, साधारण दृष्टि से तो यह मालूम होता है कि इस सिद्धान्त ने एक चेतन से समस्त जगत् बनने के प्रश्न का समाधान कर दिया। परन्तु नवीन वेदान्त के ग्रन्थों को पढ़ने से पता चलता है कि ब्रह्म, जगत, मिथ्या और सत्य के अर्थों में बहुत उलझने हैं। भिन्न २ लोगों ने इनके भिन्न २ अर्थ लिये हैं। प्रायः लोग समझते हैं कि वेदान्ती लोग जगत् को मिथ्या मानते हैं अर्थात् उनके मत में संसार भ्रम है। है नहीं परन्तु दिखाई देता है। जैसे स्वप्न में वस्तु होती नहीं पर दिखाई देती है उसी प्रकार संसार की वस्तुएं हैं नहीं पर प्रतीत होती हैं। जैसे रस्सी को लोग सांप समझते हैं या सीप को चांदी, इसी प्रकार एक सत्य ब्रह्म ही झूठ मूठ जगत के रूप में प्रतीत होता है। इस सिद्धान्त को विवर्त्त-वाद कहते हैं। वेदान्त सार में लिखा है।

अतात्त्विको ऽन्यथाभावो विवर्तः स उदीरितः।

अर्थात् बिना तत्व के एक वस्तु अन्य की अन्य प्रतीत हो तो वह विवर्त है। स्वामी शंकराचार्य संसार को इस प्रकार विवर्त्त मानते थे या नहीं; इसमें बड़ा सन्देह है। उन्होंने वेदान्त दर्शन के दूसरे अध्याय पाठ २ के २९ वें सूत्र,

वैधर्म्याच्च न स्वप्नादिवत्।

की व्याख्या करते हुये स्पष्ट लिखा है कि जगत् स्वप्न नहीं है। क्योंकि इस में स्वप्न में देखी हुई चीजों के समान धर्म नहीं पाये जाते। स्वप्न के लिये पहले जागरित अवस्था का अनुभव चाहिये। जो हम जागते समय देखते हैं उसी की स्मृति स्वप्न में भी होती है। वह लिखते हैं।

स्मृतिरेषा यत्स्वप्नदर्शनम्।

स्वप्न में स्मृति ही होती है। लोकमान्य तिलक ने गीता रहस्य में लिखा है कि।

"एक ही निर्गुण ब्रह्म पर मनुष्य की इन्द्रियां अज्ञान से सगुण दृश्यों का अध्यारोप किया करती हैं। इसी मत को 'विवर्त्तवाद' कहते हैं" (पृ० २४०)।

यही नहीं कि श्री शंकराचार्य्य स्वामी के ऊपर लिखे सूत्र के भाष्य से इस वाद की संगति नहीं मिलती। अपितु अनेकों कठिनाइयां हैं जिनको विवर्त्तवाद नहीं सुलझा सका। सीप में चांदी या रस्सी में सांप देखने वाला कोई दूसरा होता है। यदि ब्रह्म के सिवाय और

कोई है ही नहीं तो यह ब्रह्म स्वयं अपने को विवर्त्त रूप में क्यों देखता है इसका कोई सन्तोषजनक उत्तर नहीं है। जब अन्य वस्तु नहीं तो अन्यथा भाव ही कहाँ से आया। यदि जीव को ब्रह्म से अलग कोई चीज माना जाता तो यह कह सकते थे कि अल्पज्ञ या अज्ञानी जीव अपने अज्ञान के कारण शुद्ध सत्य ब्रह्म को जगत् के रूप में देखता है जिस प्रकार अन्धेरे के कारण प्रायः लोगों को रस्सी सांप मालूम होती है। परन्तु जब जीव और ब्रह्म में भेद नहीं, जब जीव ब्रह्म ही है तो यह शुद्ध ब्रह्म अपने को ही अन्यरूप में क्यों देखता हैं ?

यदि विवर्त्तवाद को हटा दें तो एक बात कही जा सकती है। ' जगत् मिथ्या ' का यह अथ नहीं कि ". जगत् है ही नहीं पर दीखता है, " किन्तु मिथ्या शब्द का अर्थ है ' बदलने वाला ' अर्थात् संसार नित्य बदलता रहता है। इस में सन्देह नहीं कि वैदिक साहित्य में ' असत्य ' शब्द इस अर्थ में भी आता है। परन्तु केवल इतने ही से सन्तुष्टि नहीं होती। प्रश्न तो यह है कि अखण्ड एक रस ब्रह्म से यह परिणामी संसार कैसे बनता है।

यस्तात्विको ऽन्यथाभावः परिणाम उदीरितः।

अर्थात् यदि किसी एक वस्तु से सचमुच ही दूसरी चीज बन जाय जैसे दूध से दही बनता है तो उसे 'परिणाम' कहेंगे। परिणामवादी कहेंगे कि ब्रह्म से ही जगत् बन

गया। परन्तु यह बात तो नवीन वेदान्तियों तथा नैय्यायिकों सभी को अभिमत है कि जो गुण कारण में नहीं वह कार्य्य में नहीं आसकता। वैशेषिक दर्शन में लिखा है,

कारणगुणपूर्वकः कार्य्यगुणो दृष्टः।

जो गुण कारण में होते हैं वही कार्य्य में आ सकते हैं। शंकर स्वामी भी वेदान्त अ० २ पा० १, सूत्र १४,

तदनन्यत्वमारम्भणशब्दादिभ्यः

का भाष्य करते हुये यही मानते हैं। तो फिर शुद्ध चेतन ब्रह्म से जड़ वस्तुयें कैसे बनेंगी। जिस खाट पर मैं बैठा हूं वह सर्वथा जड़ और ज्ञान शून्य है। क्या वह किसी अवस्था में भी एक चेतन ब्रह्म का परिणाम हो सकती है।

नवीन वेदान्तियों ने इसका एक और समाधान किया है। वह आरम्भ में विवर्त्त और तत्पश्चात् परिणाम मानते हैं। लोकमान्य तिलक के शब्दों में ही इसको रखना अधिक उपयुक्त होगा। वह लिखते हैं।

"विवर्त्तवाद का मुख्य उद्देश इतना ही दिखला देना है कि **एक ही निर्गुण ब्रह्म में माया के अनेक दृश्यों का हमारी इन्द्रियों को दिख पड़ना सम्भव है।** यह उद्देश सफल हो जाने पर अर्थात् जहां विवर्त्तवाद से यह सिद्ध हुआ कि एक निर्गुण परब्रह्म में ही त्रिगुणात्मक सगुण प्रकृति के दृश्य का दिख पड़ना शक्य है वहीं वेन्दात

शास्त्र को यह स्वीकार करने में कोई भी हानि नहीं कि इस प्रकृति का अगला विस्तार गुण परिणाम से हुआ है। अद्वैत वेदान्त का मुख्य कथन यही है कि स्वयं मूल प्रकृति एक दृश्य है—सत्य नहीं है। जहाँ प्रकृति का दृश्य एक बार दिखाई देने लगा, वहाँ फिर इन दृश्यों से आगे चल कर निकलने वाले दूसरे दृश्यों को स्वतंत्र न मानकर अद्वैत वेदान्त को यह मान लेने में कुछ भी आपत्ति नहीं है कि एक दृश्य के गुणों से दूसरे दृश्य के गुण और दूसरे से तीसरे आदि के इस प्रकार नाना-गुणात्मक दृश्य उत्पन्न होते हैं" (गीता रहस्य पृ० २४२)

परन्तु हम को इस सिद्धान्त पर दो बड़े आक्षेप हैं। प्रथम तो जैसा कि हम 'केवल विवर्त्तवाद' के विषय में कह चुके हैं ब्रह्म को विवर्त्त होने का ठीक समाधान नहीं है। अद्वैत वेदान्तियों की 'माया' उनकी कोई सहायता नहीं करती। यदि माया नित्य है तो 'अद्वैत' का खण्डन हुआ। यदि अनित्य है तो नित्य ब्रह्म से यह निकली कैसे। दूसरे पहले विवर्त्त और फिर परिणाम किसी युक्ति से भी सिद्ध नहीं होता। यह तो माना जा सकता है कि पहले परिणाम हो फिर विवर्त्त। अर्थात् जब दूध से दही बन गया तो सम्भव है कि दही को मैं कोई और चीज़ समझने लगूं। परन्तु यह सम्भव नहीं है कि यदि चूने के पानी को मैं भ्रम या विवर्त्त से दूध समझने लगूं तो फिर दूध से दही बनना



[धर्मवीर आर्यपथिक प० लेखराम]

"खेल कपट इस्लाम ने हरली जिसकी जान है।
लेखराम से वीर का हुआ सत्य बलिदान है॥"

(विभु)

आरम्भ हो जाय। 'विवर्त्त' रूपी नीव पर 'परिणाम' की दीवार बनाना ऐसा ही है जैसा मकड़ी के जाले पर पहाड़ खड़ा कर देना। पहाड़ पर मकड़ी के जाले भी देखे जा सकते हैं परन्तु मकड़ी के जालों पर पहाड़ खड़ा नहीं हो सकता।

मुसलमान और ईसाई मतों की इससे भी भिन्न विचित्र स्थिति है। वह भी एक ईश्वर से ही संसार की उत्पत्ति मानते हैं परन्तु न तो विवर्त्त से और न परिणाम से। वह कहते हैं कि सर्वशक्ति मान ईश्वर 'शून्य' से ही सब संसार रच देता है। 'नेस्ती' से 'हस्ती' या 'शून्य' से ही वस्तुओं का बन जाना सर्वथा ही युक्ति शून्य है और एक दृष्टान्त भी इस की पुष्टि में नहीं मिलता। वेदान्त दर्शन अ० २ पा० २ का २७ वां सूत्र,

उदासीनानामपि चैवं सिद्धि

इस मत का भली प्रकार खण्डन करता है। क्योंकि यदि शून्य से ही वस्तु बन जावें तो आलसियों को सभी वस्तुयें मिल जाया करें क्योंकि 'शून्य' तो आलसियों के भी पास है। ईश्वर की सर्वशक्तिमत्ता यह नहीं है कि 'नेस्ती' से 'हस्ती' करे, और न ईश्वर आज कल करता है। संसार में सभी चीज़ें अपने कारणों से बनती हुई देखी जाती हैं। 'शून्य से संसार बनने का मत तो इतना 'लचर' है कि इस पर अधिक कहने की ही आवश्यकता नहीं। कोई दार्शनिक या वैज्ञानिक इस को मानने के लिये तैय्यार न होगा।

इस प्रकार केवल चेतन-वाद उपर्युक्त प्रश्नों का उत्तर देने में असमर्थ है। यह कोई नहीं कह सकता कि संसार में बहुत्व नहीं केवल एकत्व ही है। वस्तुतः एक से अधिक वस्तुयें हैं। चाहें उनका अस्तित्व तात्विक हो चाहे कल्पित। यदि कल्पित है तो एक में 'बहुत्व' की कल्पना का क्या कारण है यह समझ में नहीं आता।

केवल जड़वादी कहते हैं कि जिस प्रकार दही और गोबर मिलाने से बिच्छू बन जाते हैं इसी प्रकार एक जड़ से ही भिन्न २ चेतन बन जाते हैं। यद्यपि दही और गोबर से सब दशाओं में बिच्छू बन ही जायँ यह ठीक नहीं। तथापि ज्ञान के अभाव से ज्ञान कैसे उत्पन्न हो जाता है इस का जड़वादियों के पास कोई उत्तर नहीं है।

नासतोविद्यते भावो नाभावो विद्यते सतः

गीता का यह कथन कि अभाव से भाव और भाव से अभाव नहीं होता सायंस के सभी विद्वानों को माननीय है। यदि चेतनता है ही नहीं तो कहां से आ जाती है ?

बहुत से दार्शनिक (फिलासफ़र) कहते हैं कि दर्शन शास्त्र अथवा फ़िलासफ़ी का कर्त्तव्य ही यह है कि इस बहुत्व-मय संसार में 'एकत्व' की खोज करे। इसलिये उन लोगों का निरन्तर प्रयत्न यह रहता है कि वह उस एकतत्व की खोज करें जिससे संसार उत्पन्न होता है चाहे वह जड़ हो चाहे चेतन। परन्तु मेरी सम्मति में दार्शनिकों ने अपना व्यर्थ

ही यह कर्त्तव्य समझ रक्खा है। दार्शनिकों का यह कर्त्तव्य नहीं है कि वह अवश्य ही 'एकत्व' से संसार की उत्पत्ति का व्याख्यान करने का प्रयत्न करें। दार्शनिकों का मुख्य कर्त्तव्य उन मूल तत्त्वों की खोज है जिनसे संसार बनता है चाहे वह एक तत्व हो चाहे एक से अधिक। यदि संसार में कई तत्व हैं तो उनको एक तत्व में दर्शाने की कोशिश करना सर्वथा व्यर्थ है। न तो अद्वैत से द्वैत उत्पन्न हो सकता था और न द्वैत को अद्वैत में परिवर्त्तन किया जा सकता है।

संसार में हम जड़ और चेतन दो प्रकार की वस्तुयें देखते हैं। परन्तु चेतन में भी भेद है। मैं क़लम से लिख रहा हूं। मेरी लड़की मेरी मेज़ से कुछ दूर पर रोटी पका रही है। यह दोनों चेतन सत्तायें हैं। एक 'मैं' और दूसरी 'मेरी लड़की'। मेरी क़लम जड़ है जिसे मैं चला रहा हूं। रोटी या आटा भी जड़ है जिस से मेरी लड़की भोजन बना रही है। यहाँ क़लम, स्याही, काग़ज़ जड़ हैं और मेरी चेतन सत्ता द्वारा चलायमान हो रहे हैं। वहां आटा, चूल्हा, चकला जड़ हैं और मेरी लड़की की चेतन सत्ता द्वारा चल रहे हैं। न क़लम में अपनी गति है। न आटे में। परन्तु मेरी और मेरी लड़की की सत्तायें दो हैं। एक नहीं। यह दोनों चेतन हैं। ज्ञानवान हैं। परन्तु मेरे ज्ञान का मेरी लड़की को पता नहीं और लड़की के ज्ञान का मुझ को पता नहीं। इसलिये हम दोनों अलग २ सत्तायें हैं। इसी प्रकार पाठशाला में गुरु पढ़ा रहा है, शिष्य पढ़ रहे हैं। एक

अपना ज्ञान दूसरों को दे रहा है। इसलिये वह सब गुरु और शिष्य भिन्न २ चेतन सत्तायें हैं एक नहीं। यदि एक सत्ता होती तो पढ़ाना असम्भव था और न पढ़ाने की ज़रूरत ही थी। इस प्रकार संसार में असंख्यों चेतन सत्तायें मिलती हैं। इन्हीं का नाम "जीव" है। मनुष्य, पशु, पक्षी, कीट, पतंग यह सब चेतन सत्तायें हैं। जो अपने जड़ शरीरों को चलायमान करती हैं।

कुछ लोग समझते हैं कि यह शरीर ही जीव है। शरीर से इतर और कोई भिन्न जीव नहीं। चारवाक आदि नास्तिकों का यही मत था। परन्तु यह ठीक नहीं। हम यहाँ कुछ युक्तियाँ देते हैं।

(१) यदि चेतनता शरीर से इतर वस्तु नहीं तो यह उन तत्वों में होगी जिन से शरीर बनता है। परन्तु तत्वों में चेतनता नहीं है। यदि भिन्न २ तत्व में भिन्न २ चेतनतायें हैं तो उन भिन्न २ चेतनताओं से मिल कर हमारी जैसी चेतनता नहीं उत्पन्न हो सकती।

(२) यदि पृथ्वी आदि तत्वों के संयोग से चेतनता होती तो घड़े में भी चेतनता होती क्योंकि घड़ा भी तो हमारे शरीर के समान इन्हीं तत्वों से बना है।

(३) यदि पृथ्वी आदि तत्वों का गुण चेतनता होती तो जब तक पृथ्वी है तब तक चेतनता भी रहती, जैसे आग में गर्मी सदा रहती है। परन्तु हम देखते हैं कि मृत्यु के पश्चात्

चेतनता नहीं रहती यद्यपि शरीर अपने सभी तत्वों सहित विद्यमान रहता है। कभी कभी जीवन काल में भी मूर्छा आ जाती है। इस से सिद्ध है कि शरीर से जीव भिन्न है।

(४) अगर शरीर से इतर जीव की सत्ता न होती तो युवा अवस्था की बात वृद्धावस्था में याद न रहती। क्योंकि शरीर तो सर्वथा बदल जाता है। जो शरीर युवावस्था में था वह वृद्धावस्था में नहीं रहता।

(५) यदि कहो कि शरीर के अवयव बदल जाते हैं परन्तु पहले अवयवों का पिछले अवयवों से संसर्ग होता रहता है इसलिये युवावस्था की बात वृद्धावस्था में याद रहती है, तो यह युक्ति भी ठीक नहीं। यदि ऐसा होता तो लड़के को बाप के अनुभवों का ज्ञान होता। परन्तु ऐसा नहीं होता। अतः सिद्ध है कि जीवात्मा शरीर से इतर एक वस्तु है।

(६) मनोविज्ञान (Psychology) से पता चलता है कि प्रत्येक मनुष्य अपने आत्मा को अपने शरीर से भिन्न समझता है। जब मैं कहता हूं कि "यह मेरा शरीर है," 'यह मेरा हाथ है' "यह मेरा पेट है" तो इससे उसका तात्पर्य्य होता है कि शरीर और शरीर के अवयव आत्मा से भिन्न पदार्थ हैं। दूसरी बात यह है कि 'मैं' का ज्ञान मनुष्य को यह नहीं बताता कि "मैं" कई चीजों के संयोग का नाम है। वस्तुतः 'मैं' का भाव ऐसी वस्तु का भाव है जो एक है

और जिसके टुकड़े नहीं हो सकते, यह भाव निरन्तर रहता है। यदि मैं इस "अहङ्कार" के भाव पर विचार करता हूं तो पता चलता है कि मुझे कभी ऐसी अवस्था का भाव नहीं आता जब मैं न था या जब मैं न रहूँगा। इस प्रकार 'आत्मा' के चेतन, निरवयव, अभौतिक, और अनादि तथा अनन्त होने में आत्मा स्वयं एक आन्तरिक साक्षी है।

(७) इन्द्रियाँ भी चेतन नहीं हैं किन्तु चेतन का साधन मात्र हैं। यही कारण है कि आंख से नीबू देखकर जीभ को पुराने खाये हुये नीबू के स्वाद की याद आ जाती है।

इन सब युक्तियों से पता चलता है कि संसार में असंख्यों जीव हैं जो भौतिक शरीर के द्वारा कार्य करते हैं। शरीर और जीव के सम्बन्ध को वैदिक शास्त्रों में भिन्न २ प्रकार से कथन किया गया है। उपनिषत् कहती है।

आत्मानं रथिनं विद्धि शरीरं रथमेवच।

(कठोपनिषत्)

अर्थात् शरीर रथ है और जीव आत्मा उसका सवार है जिस प्रकार यात्रा के लिये रथ की आवश्यकता होती है उसी प्रकार जीवनयात्रा के लिये शरीररूपी रथ की आवश्यकता होती है।

गीता में कहा है:—

वासांसि जीर्णानि यथाविहाय नवानि गृह्णाति

नरोपराणि। तथा शरीराणि विहाय जीर्णान्यन्यानि संयाति नवानि देही (गीताः अ० २ ॥ २२)

अर्थात् शरीर वस्त्र के समान है और जीव पहनने वाले के समान है। जैसे पहनने वाला पुराने कपड़ों को उतार कर नये पहनता है उसी प्रकार जीव एक शरीर को छोड़कर दूसरे को ग्रहण कर लेता है।

हम ऊपर कह चुके हैं कि जीव आत्मा निरवयव और अभौतिक है। इसके टुकड़े २ नहीं हो सकते। यह किसी वस्तु के संयोग से नहीं बना। जो किसी के संयोग से न बने वह नित्य होता है। वह अजर है, अमर है। इसीलिये गीता में कहा है।

नैनं छिंदन्ति शस्त्राणि नैनं दहति पावकः।
न चैनं क्लेदयन्त्यापो न शोषयति मारुतः।
(अ० २ ॥ २३)

अर्थात् जीवात्मा को तलवार काट नहीं सकती, आग जला नहीं सकती, जल गला नहीं सकता और वायु सुखा नहीं सकता!

इसी सिद्धान्त का वर्णन करते हुये यजुर्वेद में लिखा है।

वायुरनिलममृतमथेदं भस्मान्तं शरीरम्।

(अ० ४० । १०)

जीवात्मा (वायु) अर्थात् चेतन है (अनिलम्) इला अर्थात् पृथिवी आदि भूतों से बना नहीं है। (अमृतम्) और

नित्य है। और इसके विपरीत शरीर भस्म हो जाने वाला है।

अब तक हमने असंख्यों जीव और उनके भौतिक पदार्थों से बने हुये शरीरों का वर्णन किया। परन्तु जीवों को अपने से भिन्न और प्रबल एक और चेतन का कार्य दृष्टिगोचर होता है। जिस समय एक मनुष्य मरता है तो उसका जीव शरीर से निकलना नहीं चाहता। परन्तु उसे निकलना पड़ता है। अब प्रश्न यह है कि वह कौनसी सत्ता है जो आत्मा को शरीर से खींच कर बाहर निकाल रही है। शरीर स्वयं तो आत्मा को निकालने के योग्य है नहीं। प्रथम तो यह जड़ है। दूसरे जब शरीर पुष्ट था उस समय आत्मा उसके ऊपर आधिपत्य रखता था। जब पुष्ट शरीर का ही आत्मा पर कोई बस नहीं था तो दुर्बल और रोग-ग्रसित शरीर पर आत्मा का प्रभुत्व क्यों न होता। इससे पता चलता है कि शरीर आत्मा को अपने में से निकालने में असमर्थ है और आत्मा स्वयं निकलना नहीं चाहता, अतः प्रतीत होता है कि शरीर और जीवों से भिन्न एक तीसरी सत्ता है जो बलवान से बलवान आत्मा को उसके शरीर से बलात्कार बाहर निकाल देती है। ठीक उसी प्रकार जैसे एक राज कर्म्मचारी किसी मनुष्य को उसके मकान से बाहर निकाल देता है।

इसी तीसरी सत्ता का नाम ईश्वर है। मौत के समय इन तीनों का अस्तित्व यथार्थ रूप से समझ में आ जाता

है। अर्थात् एक शरीर जो भौतिक अवयवों से मिलकर बना है और जड़ है, दूसरा जीव जो उस शरीर से निकाला जा रहा है और तीसरा ब्रह्म या ईश्वर जो जीवात्मा को शरीर से ज़बरदस्ती निकाल रहा है। मृत्यु की इस घटना से यह भी स्पष्ट होता है कि यह तीसरी सत्ता अर्थात् ब्रह्म, सभी जीवों के ऊपर, प्रबल और अनन्त सत्ता है क्योंकि इसका आधिपत्य न केवल जीवों पर ही है परन्तु अधिकतर शरीरों पर भी है। जीवों ने शरीरों को अपनी क्रिया का साधन अवश्य बनाया, वह उससे अपना काम लेते रहे। परन्तु न तो शरीरों को जीवों ने बनाया, न बिगाड़ा। यदि जीव शरीर के बनानेवाले होते तो प्रत्येक जीव अपने शरीर के अवयवों से अभिज्ञ होता। घड़ीसाज़ घड़ी को बनाता है तो उसको घड़ी के प्रत्येक पुरज़े का ज्ञान है। परन्तु मुझे अपने शरीर के किसी पुरज़े का ज्ञान नहीं। डाक्टरों ने भी बड़ी खोज के साथ इनका कुछ पता पाया है और विशेष कर शरीर को काट कर। शरीर के सहस्त्रों अवयव ऐसे हैं जो बिचारे डाक्टरों की अब भी समझ में नहीं आते। इससे मालूम होता है कि शरीरों का बनानेवाला शरीरों को प्रयोग में लानेवालों से बहुत प्रबल, ज्ञानी और नियन्ता है। बहुत से लोग कहा करते हैं कि हमारा शरीर हमारे माता-पिता का बनाया हुआ है। परन्तु जिस प्रकार हमको अपने शरीर की बनावट का ज्ञान नहीं उसी प्रकार हमारे माता-पिता

को भी नहीं। वह भी शरीर के निर्माण के साधनमात्र हैं। शरीर न स्वयं बनते हैं और न जीव उनको बनाता है। उनके बनाने वाला तो एक तीसरी ही सत्ता है जिसे ब्रह्म कहते हैं। शरीरों को हम चलाते अवश्य हैं परन्तु उन की सब गतियाँ हमारे हाथ में नहीं हैं। हम हाथों से आखों का और नाक से कानों का काम नहीं ले सकते। शरीर के बहुत से अवयव हैं जिनको हिलाना हमारी सामर्थ्य के बाहर हैं। यदि कोई अवयव टूट जाता है तो हम जोड़ नहीं सकते। यदि जोड़ भी सकते हैं तो परिमित रूप से। शरीर की बनावट, हड्डियों का जोड़, रुधिर की नालियाँ, भोजन के पचाने के औज़ार, हृदय, फेफड़ा आदि सभी ऐसे विचारपूर्ण और महत्व के हैं कि उनसे उनके बनाने वाले प्रभु की सत्ता का पूर्ण प्रमाण मिल जाता है।

जिस प्रकार शरीर के निर्माण पर हमारा आधिपत्य नहीं उसी प्रकार शरीर से भी विशाल सूर्य्य, चन्द्र, पृथ्वी, वायु-मण्डल आदि का संचालन भी जीवों से नहीं होता। इन का रचयिता भी ईश्वर ही है। जिस प्रकार हमारे शरीर में आंख, कान, नाक, आदि स्वयं नहीं बन जाते इसी प्रकार वृक्ष, पहाड़, नदी तारे आदि भी स्वयं नहीं बन सकते। प्रायः बहुत से लोग कह दिया करते हैं कि इन को कुदरत (nature) बनाती हैं। परन्तु इन्होंने कभी कुदरत के अर्थों पर विचार नहीं किया। वस्तुतः संसार में जितने कार्य्य दृष्टिगोचर होते हैं

उन सब का संयुक्त नाम कुदरत या नेचर है। इस से भिन्न नेचर कोई अन्य वस्तु नहीं। अतः नेचर कार्य्य ही है कर्त्ता नहीं। कर्त्ता इनसे भिन्न चीज़ है।

यहां एक बात और याद रखनी चाहिये। जिस प्रकार नाक से सूंघने वाला, कान से सुनने वाला और हाथ से काम करने वाला वस्तुतः एक ही जीव है जो शरीर के सूक्ष्म से सूक्ष्म अवयव को चलाता है इसी प्रकार समस्त संसार की सूक्ष्म से सूक्ष्म वस्तु का निर्माण करने और चलानेवाला एक ईश्वर है। यदि एक से अधिक ईश्वर होते तो संसार के कार्य्यों में भी ऐक्य न होता। परन्तु हम देखते हैं कि यह ऐक्य सभी चीज़ों में मिलता है। जो नियम इंग्लैंड की टेम्स नदी के जल को चलाते हैं वही प्रयाग की गंगा के जल को। जो नियम जमुना नदी के जल में तैरती हुई मछलियों के शरीर को चमकाने के कारण हैं उन्हीं नियमों से पर्वतों के शिखर पर बर्फ़ चमकती है या बाग़ों के फूल चमकते हैं। इसी प्रकार जो नियम सृष्टि में वायु मण्डल को नियमित करते हैं उन्हीं से हमारे शरीर के प्राण-मण्डल का संचालन होता है। इससे प्रकट होता है कि—

(१) ईश्वर एक है।

(२) वह अति सूक्ष्म अर्थात् सूक्ष्म से भी सूक्ष्म है।

(३) वह निराकार है और किन्हीं दे वस्तुओं के शरीर से बना नहीं हैं।

(४) वह अत्यन्त ज्ञानी है। उसका ज्ञान संसार की प्रत्येक वस्तु से प्रकट होता है।

(५) वह एक रस है अर्थात् उस में कभी परिवर्त्तन नहीं होता। यदि वह परिवर्त्तनशील होता तो दूसरी चीज़ों में परिवर्त्तन न कर सकता।

(६) वह अवतार नहीं लेता क्योंकि अखण्ड एक रस है। उसमें परिवर्त्तन हो ही नहीं सकता।

(७) वह सर्व व्यापक और सर्वशक्तिमान है क्योंकि उसकी महिमा संसार के प्रत्येक स्थान और प्रत्येक कण से प्रकट होती है।

ईश्वर और जीव में यह भेद है कि यद्यपि ईश्वर और जीव दोनों चेतन हैं तथापि ईश्वर एक है और जीव बहुत से हैं। ईश्वर सर्वव्यापक है और जीव एक-देशीय है। ईश्वरसर्व शक्तिमान है। जीव थोड़ी शक्ति वाला है। जीव को अपना काम करने के लिये शरीर की आवश्यकता होती है पर ईश्वर अपना कार्य्य बिना किसी की सहायता के कर सकता है। ईश्वर आनन्द-स्वरूप है अर्थात् उसमें लेशमात्र भी दुःख नहीं। इसलिये उसको खाने, पीने, भोगने की आवश्यकता नहीं होती। जीव में इच्छा और द्वेष पाये जाते हैं। इसलिये उसको दुःख और सुख दोनों होते रहते हैं। जब उसे इच्छा के अनुकूल वस्तु मिलती है तो वह सुखी होता है और जब इच्छा के विरुद्ध, तो दुःखी होता है। इसलिये उसको खाने, पीने, भोगने की ज़रूरत पड़ती है।

जीव के भोगने का साधन शरीर है। इस प्रकार शरीर जीव के कर्म और भोग दोनों का साधन है। यह शरीर भौतिक है अर्थात् पृथ्वी आदि पांच तत्वों से बना है। यह तत्व जीव और ईश्वर के समान अनादि और अनन्त अर्थात् नित्य हैं। ईश्वर इन तत्वों को जोड़कर शरीर बनाता है। शरीर में सदा परिवर्त्तन हुआ करता है। बच्चे का शरीर छोटा होता है और फिर शनैः २ बढ़ता है। बुड्ढे का शरीर बढ़ता नहीं किन्तु घटने लगता है। और एक दिन मृत्यु हो जाती है। जीव के लिये जन्म और मृत्यु क्रमशः होते रहते हैं। जीव के शरीर के साथ संयोग होने का नाम जन्म और वियोग का नाम मृत्यु है। जीव स्वयं न कभी नष्ट होता है न उत्पन्न होता है। इस लगातार जन्म और मरण का नाम 'आवागमन' या "पुनर्जन्म" है। इसी को अवतार भी कह सकते हैं। अर्थात् चेतन जीव भौतिक शरीर में अवतरित होता या उतरता है। राम, कृष्ण, ईसा, बुद्ध आदि सब जीव थे इनको ईश्वर मानना भूल है। हाँ इतनी बात अवश्य है कि जीव शरीर को पाकर यदि धर्मानुकूल जीवन व्यतीत करता है और ज्ञान-प्राप्ति में लगा रहता है तो उसकी उन्नति होती जाती है और जितनी उसकी उन्नति होती है उतना ही उसको अच्छा शरीर मिलता है। इसी प्रकार राम, कृष्ण आदि ज्ञानी और उच्च जीव थे। ऐसा ही उनके जीवन चरित्रों से विदित होता है। उनमें इच्छा, द्वेष, सुख दुख

सभी पाये जाते थे। वह अपनी मर्य्यादा के भीतर ही उन्नति कर सकते थे। इससे अधिक नहीं। वह ईश्वर कभी नहीं हो सकते। ईश्वर तो एक ही है। वह उनके समय में भी था और उनके बाप दादों के समय में भी।

ईश्वर और जीवों से भिन्न अन्य कोई चेतन शक्तियाँ नहीं हैं। आप उत्तम जीवों को ही देवी या देवता कह सकते हैं। परन्तु इन से इतर देवी देवते कोई नहीं। जो लोग शिवजी, गणेशजी, आदि को ईश्वर या जीव से भिन्न देवते मानते हैं वह भूलते हैं। संस्कृत साहित्य में यह शब्द कभी २ मनुष्य विशेष के नाम और कभी २ ईश्वर के नाम हैं। आजकल भी गणेश और शिव आदि नाम वाले मनुष्य मिलते हैं। वेदों में यह नाम ईश्वर के भी आये हैं जैसे "नमः शिवाय च शिवतराय च" अर्थात् कल्याणकारी ईश्वर को नमस्कार हो। परन्तु यहां ईश्वर और जीव से भिन्न किसी तीसरे चेतन से तात्पर्य नहीं है।

देवी देवताओं के मानने का मुख्य कारण यह है कि लोगों ने भूल से संस्कृत शब्द देव, देवता और देवी के अर्थों में गड़बड़ करदी है। वैदिक साहित्य में 'देव' शब्द प्रायः निम्न अर्थों में आता है:—

(१) ईश्वर के अर्थ में

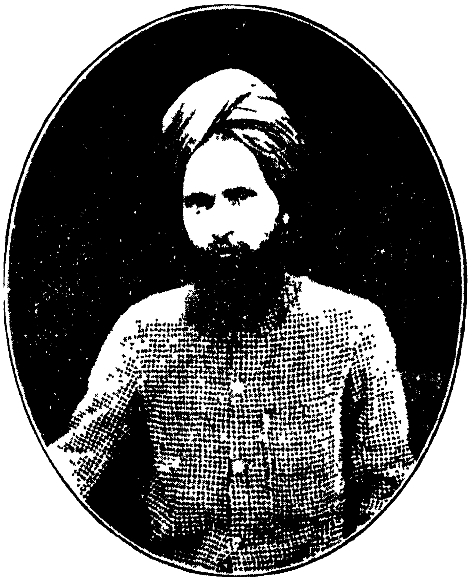
(२) विद्वान के अर्थ में

(३) प्रकाश करनेवाली चीजों के अर्थ में, जैसे सूर्य्य, दीपक आदि।

(४) संसार के भिन्न २ पदार्थों के अर्थ में। जैसे तेतीस देवों में निम्न पदार्थ सम्मिलित हैं:—आठ वसु अर्थात् पृथ्वी, जल, अग्नि, वायु, आकाश, सूर्य्य, चन्द्र, नक्षत्र; ग्यारह रुद्र अर्थात् दस प्राण और एक आत्मा; १२ आदित्य अर्थात् १२ महीने; एक यज्ञ और एक इन्द्र अर्थात् बिजली। देव और देवी शब्द तो भद्र पुरुष और भद्र स्त्रियों के लिये आज कल भी आते हैं। परन्तु वैदिक साहित्य में 'देव' या 'देवता' ऊपर लिखे अर्थों में आता था। होते होते लोगों ने यह समझा कि देवी या देवता ईश्वर, जीव और प्रकृति से भिन्न कोई चौथे पदार्थ हैं। वस्तुतः बड़े २ राजे महाराजे या महात्मा कभी कभी अपनी विशेष योग्यता के लिये 'देव' कहलाते थे। परन्तु थे वह जीव ही। लोगों ने विशेषता को यहां तक बढ़ाया कि उन को ईश्वर मानने लगे। ईसाई और मुसलमान धर्मों में 'फ़रिश्ते' भी इसी प्रकार माने जाने लगे। 'ईसा' को लोग ईश्वर का बेटा पहले इसलिये कहते होंगे कि वह अपने देश और समय में एक उत्तम पुरुष था। पहले यूनानी लोगों की रीति थी कि बड़े आदमी को ईश्वर का बेटा कह देते थे। शनैः २ लोग यह समझने लगे कि 'ईसा' किसी विशेष अर्थ में ईश्वर का बेटा है। यही नहीं, कुछ ईसाई लोग तो इस को ईश्वर का अवतार मानते हैं। वस्तुतः वह यह नहीं समझते

कि ईश्वर, जीव और प्रकृति के सिवाय अन्य कोई पदार्थ है ही नहीं।

हम ऊपर कह चुके हैं कि जीव अवतार लेता है अर्थात् वह एक शरीर छोड़ कर दूसरे शरीर को धारण करता है। परन्तु ईश्वर अवतार नहीं लेता। जो ईश्वर का अवतार मानते हैं वह भ्रम में हैं। कुछ लोग कहते हैं कि ईश्वर सर्व शक्तिमान है इसलिये वह सब कुछ कर सकता है। और इसलिये अवतार भी ले सकता है। उनको जानना चाहिये कि सर्वशक्तिमान का केवल इतना अर्थ है कि उस में सब शक्तियां हैं अर्थात् जितने प्रकार की शक्तियां संसार में पाई जाती हैं वह सब ईश्वर में हैं। वह संसार के प्रत्येक परमाणु को हिला सकता है। जीव को एक स्थान से दूसरे स्थान में ले जा सकता है। परन्तु सर्वशक्तिमान का यह अर्थ किसी शब्द से नहीं पाया जाता कि वह सब काम कर सकता है। संसार में सैकड़ों काम ऐसे हैं जो जीव ही कर सकते हैं ईश्वर नहीं कर सकता। अर्थात् ईश्वर मर नहीं सकता, ईश्वर झूठ नहीं बोल सकता। ईश्वर बदल नहीं सकता। ईश्वर चोरी नहीं कर सकता इत्यादि २। फिर हम पूछते हैं कि ईश्वर के अवतार लेने का प्रयोजान क्या है? यदि कहो कि यह प्रयोजन स्वयं ईश्वर में विद्यमान है तो ईश्वर स्वार्थी, और अल्प हो जायगा। यदि कहो कि यह प्रयोजन ईश्वर से इतर जीव में विद्यमान है तो भी ईश्वर सर्वशक्ति



डी. ए. वी. कालेज, लाहोर के सर्वस्व

श्री महात्मा हंसराज जी

[देखो पृष्ठ १३२]

मान नहीं रहेगा क्योंकि जीव उस को बदलने के लिये बाधित करेगा।

कुछ लोग (जैसे ईसाई और मुसल्मान लोग) कहते हैं कि जीव और प्रकृति अनादि नहीं हैं। ईश्वर ने इनको बनाया है। वह सर्वशक्तिमान है इसलिये बिना जीव और प्रकृति की सहायता के भी सष्टि बना सकता है। परन्तु यह लोग आर्य्यसमाज का सिद्धान्त नहीं समझते। ईश्वर सष्टि बनाने में जीव और प्रकृति की सहायता नहीं लेता किन्तु जीव और प्रकृति को ही सृष्टि रूप कर देता है। जीव और प्रकृति साधन नहीं हैं किन्तु वह पदार्थ हैं जिन पर ईश्वर की क्रिया का फल गिरता है। यदि ईश्वर यज्ञदत्त को मारता है तो कर्त्ता ईश्वर है, मारना क्रिया है और यज्ञदत्त कर्म हैं। अब यदि कोई कहे कि मारने में यज्ञदत्त की आवश्यकता नहीं, ईश्वर बिना यज्ञदत्त के भी मार सकता है तो यह उसका कहना सर्वथा भ्रांन्ति होगी। कर्म को कारण मान लेना भूल है। "मैं किताब को देखता हूं।" यहां 'किताब' साधन नहीं है किन्तु कर्म है। यदि जीव और प्रकृति न होते तो ईश्वर स्वयं अपने लिये कुछ न बनाता उसको क्या आवश्यकता थी कि वह कुछ बमाता। उसने तो जीवों के भोग के लिये ही सृष्टि बनाई है।

सार यह निकला कि ईश्वर, जीव और प्रकृति अनादि हैं। यह सदा से हैं और सदा रहेंगे। ईश्वर सर्वव्यापक, एक,

सर्वज्ञ और सर्वशक्तिमान है। जीव कई, अल्प और एक देशी चेतन हैं। उनके भोग और कर्म के लिये ही ईश्वर प्रकृति को अनेक रूप से बनाता है। जीव कर्म करने में स्वतंत्र और फल भोगने में परतंत्र हैं। जीवों को एक शरीर छोड़ कर दूसरा शरीर अपने कर्मानुसार लेना पड़ता है। जब उनको अपनी मर्य्यादा के अनुसार अत्यन्त ज्ञान हो जाता है तो उनकी मुक्ति हो जाती है। अर्थात् वह एक बहुत बड़े काल पर्य्यन्त शरीर के बन्धन से छूट जाते हैं। और ईश्वर को साक्षात् करके आनन्द में रहते हैं। उस नियतकाल के पश्चात् वह फिर संसार में आते हैं और अपने कार्य्यों का चक्र आरम्भ करते हैं। इस प्रकार जीव सदा ईश्वर और प्रकृति से प्रभावित रहते हैं। ईश्वर से अधिक संपर्क सुख देता है और प्रकृति से अधिक संपर्क दुःख का कारण होता है।

दूसरा अध्याय

वेद और शास्त्र

आर्य्य समाज का सिद्धान्त है कि वेद ईश्वरीय ज्ञान है। जब सृष्टि की उत्पत्ति होती है तो ईश्वर मनुष्यों की ज्ञान वृद्धि और कर्त्तव्य परायणता के लिये चार मनुष्यों को जो अपने पूर्व जन्म की योग्यता के कारण विशेषता रखते हैं ऋग्वेद, यजुर्वेद सामवेद और अथर्ववेद देता है। इन ऋषियों के

नाम हैं अग्नि, आदित्य, वायु और अङ्गिरा। यह संसार में उस ज्ञान का प्रचार करते हैं। और गुरु शिष्य की परम्परा चल पड़ती है। यह बात सभी जानते हैं कि जीव में बिना पढ़ाये ज्ञान प्राप्ति की योग्यता नहीं है। इसलिये ईश्वर की यह महती दया है कि उसने हमारे लाभ के लिये वेद दिये।

सृष्टियां निरन्तर होती रहती हैं। अर्थात् सृष्टि के पीछे प्रलय और प्रलय के पीछे सृष्टि। जब प्रकृति के परमाणु मिल कर चीज़ें बन जाती हैं तो सृष्टि कहलाती है। जब प्रकृति के परमाणु कारण अवस्था में रह जाते हैं तो प्रलय कहलाती है। वेद प्रत्येक सृष्टि की आदि में दिये जाते हैं।

इस सृष्टि की आदि में भी वेद दिये गये। जब बहुत काल के पश्चात् लोगों को वेदों का प्राचीन ऋषियों का बताया अर्थ विस्मृत हो गया तो विद्वानों ने ब्राह्मण ग्रन्थ रचे जिन में वेद मंत्रों के विनियोग तथा कहीं कहीं अर्थ भी दिये। ईश्वर प्राप्ति के विषय में ऋषियों के सम्भाषण भी उन ब्राह्मणों में लिखे गये जिनको उपनिषद् या आरण्यक कहते हैं।

निम्नलिखित ब्राह्मण ग्रन्थ प्रसिद्ध हैं।

(१) ऐतरेय ब्राह्मण

(२) शतपथ ब्राह्मण

(३) साम ब्राह्मण

(४) गोपथ ब्राह्मण

ब्राह्मण ग्रन्थों का बहुत सा भाग यज्ञ सम्बन्धी है। परन्तु

उपनिषदें अधिकतर ब्रह्म विषयक ही हैं। निम्नलिखित उपनिषदें आर्य्य समाज को माननीय हैं:—

(१) बृहदारण्यक, (२) छान्दोग्य (३) मुण्डक, (४) माण्डूक्य (५) ऐतरेय (६) तैतरेय (७) ईश (८) केन (९) कठ (१०) प्रश्न (११) श्वेताश्वितर।

कुछ समय के पश्चात् ऋषियों ने सूत्र ग्रन्थ बनाये इन में कुछ धर्म सूत्र हैं जिनमें मानवी समाज के संचालन के नियम दिये हैं जैसे मानव धर्म सूत्र। कुछ गृह्य सूत्र हैं जिनमें नैमित्तिक त्यौहारों और संस्कारों का वर्णन है। मुख्य २ गृह्य सूत्र यह हैः—आपस्तम्भ, गोभिलि, आश्वलायन, पारस्कर

मानव धर्म सूत्र के ही आधार पर मनुस्मृति श्लोकबद्ध की गई। इस में चारों वर्ण और आश्रम के नियम दिये हुये हैं। आजकल स्मृतियाँ तीस के लगभग हैं परन्तु आर्य्य समाज मनु-स्मृति को ही प्रामाणिक मानता है क्योंकि यही प्राचीनतम है। इसको भृगु संहिता भी कहते हैं क्योंकि भृगु ने इसको श्लोक बद्ध किया था।

दर्शन शास्त्र छः हैं जिनमें ईश्वर जीव प्रकृति, कर्म, भोग आदि गम्भीर दार्शनिक विषयों पर विचार किये गये हैं। यह भी सूत्रों में हैं। इनकी संख्या छः है, (१) व्यास मुनि का वेदान्त (२) जैमिनि मुनि का कर्म मीमांसा (३) पतञ्जलि

मुनि का येाग (४) कपिल मुनि का सांख्य (५) कणाद मुनि का वैशेषिक (६) गौतम मुनि का न्याय।

आजकल बहुत से लोग समझते हैं कि यह छः शास्त्र एक दूसरे के विरुद्ध हैं। कोई कहता है कि सांख्य ईश्वरवादी नहीं है। कोई कहता है कि वेदान्त जीव और ब्रह्म की एकता का प्रतिपादक हैं। परन्तु यह बात नही हैं, वस्तुतः यह सब शास्त्र एक हैं केवल भेद इतना है कि भिन्न २ दर्शनेां में एक ही प्रश्न के भिन्न २ रूप से उत्तर दिये गये हैं। आर्य्यसमाज यद्यपि इन सब ग्रन्थों को प्रामाणिक मानता है परन्तु स्वतः प्रमाण केवल वेद ही हैं क्येांकि वेद ईश्वरकृत होने से भ्रान्तिरहित हैं। परन्तु ब्राह्मण आदि ग्रन्थ मनुष्य कृत होने से केवल उतने ही अंश में प्रमाण हैं जितने में वह वेदानुकूल हैं।

कुछ लोग समझते हैं कि वेद आर्य्यों ने भिन्न २ समयेां में रच लिये और उनमें भिन्न २ मनुष्येां की कथायें हैं। परन्तु यह बात आन्तरिक और वाह्य दोनेां प्रकार की साक्षियेां से सिद्ध नहीं होती। प्रथम तेा वेद में स्वतः लिखा है कि वह ईश्वर कृत है * दूसरे इनसे प्राचीनतम कोई पुस्तक नहीं।

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* (१) तस्माद्यज्ञात् सर्वहुतः ऋचः सामानि जज्ञिरे। छन्दाँसि जज्ञिरे तस्मात् यजुः तस्मादजायत। (अथर्ववेद) अर्थात् ऋक्, यजु, साम और अथर्व ईश्वर से उत्पन्न हुये।

(२) देवस्य पश्य काव्यं न ममार न जीर्यति। (अथर्ववेद) ईश्वर के काव्य अर्थात् ज्ञान को देखो। वह न कभी मरता हैं न जीर्ण होता है।

क़ुरान में बाइबिल का वर्णन है, बाइबिल में ज़बूर का है, ज़बूर में तौरेत की है। इससे भी पुरानी ज़िन्दावस्था में वेदों का है। परन्तु वेदों में किसी पुस्तक का वर्णन नहीं। तीसरे भारतवर्ष के सभी प्राचीन ऋषि मुनि और ग्रंथ कार इसको मानते चले आये हैं कि वेद ईश्वर कृत हैं, यहां तक कि दर्शनकारों ने भी वेद को स्वतः प्रमाण माना है। और जिन कपिल को लोग अनीश्वरवादी मानते हैं उन्होंने भी सांख्य दर्शन में वेदों को ईश्वरकृत अर्थात् स्वतः प्रमाण माना हैं।* स्वामी शंकराचार्य आदि महात्मा भी यही कहते हैं और गीता, रामायण, आदि में भी यही लिखा है। वेदों में कोई इतिहास नहीं है। जिन शब्दों को लोगों का नाम समझ लिया गया है वह वस्तुतः यौगिक संज्ञायें हैं। संसार में देखा भी जाता है कि आदि में एक शब्द यौगिक होता है फिर लोग उस को व्यक्तिवाचक संज्ञा बना लेते हैं, इसके कुछ उदाहरण हम शतपथ ब्राह्मण से देते हैं:—

(१) प्राणो वै वसिष्ठ ऋषिर्यद्वैनु श्रेष्ठस्तेन वसिष्ठोऽयो यद्वस्तृतयो वसति तेनोऽएववसिष्ठः।

(२) मनो वै भारद्वाज ऋषिरन्नं वाजो यो वै मनो बिभर्ति सोऽन्नँ वाजं भरति तस्मान्मनो भरद्वाज ऋषिः।

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(३) यथेमांवाचं कल्याणीमावदानि जनेभ्यः (यजुर्वेद) जैसे मैंने इस कल्याणकारी वेद को मनुष्यों के हित के लिये दिया है।

* देखो निजशक्त्यभिव्यक्तेः स्वतः प्रामाण्यम्।

(३) चक्षुर्वै जमदग्निऋषिर्यदनेन जगत्पश्यत्यथो मनुते तस्माच्चक्षुर्जमदग्नि ऋषिः ।

अर्थ (१) वसिष्ठ का अर्थ प्राण है क्योंकि वसिष्ठ श्रेष्ठ को कहते हैं । जो उत्तम प्रकार से बसे वह वसिष्ट ।

(२) भरद्वाज का अर्थ है मन क्योंकि यह दो शब्दों से बना है (भरत्+वाज) भरत=भरना, वाज=अन्न ।

(३) जमदग्नि का अर्थ है आंख क्यों कि आंख से सब जगत् को देखते हैं ।

इस प्रकार वेदों में वसिष्ठ, भरद्वाज, जमदग्नि शब्दों के यौगिक अर्थ प्राण, मन और आंख थे फिर कुछ दिनों पीछे यही शब्द लोगों ने अपने नाम बना लिये *। 'राम' शब्द भी वेदों में 'काले' के अर्थ में आया है । वहाँ 'दशरथ' के पुत्र से अभिप्राय नहीं है ।

लोगों ने यौगिक शब्दों के व्यक्तिवाचक समझ कर उन में कहानियाँ भी कल्पित करलीं इसके कारण वेदों के समझने में बड़ी कठिनाई हुई और वैदिक धर्म का प्रचार जाता रहा । महीधराचार्य, सायणाचार्य, उव्वटाचार्य आदि ने जो वेदों के भाष्य किये उनमें उन्होंने इसका विचार नहीं किया और जो

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* 'भद्रो भद्रया' इति सामवेदीय मंत्र में सायणाचार्य्य 'राम' शब्द का अर्थ करते हैं '**रामं** कृष्णं शार्वरं तमः' अर्थात् 'राम' का अर्थ है काला या रात्रिके समान अंधेरा

कथाय उनके समय में प्रचलित हो चुकी थीं उन्हीं के आधार पर अर्थ कर दिये। इस प्रकार अर्थों का घोर अनर्थ हो गया। ऋषि दयानन्द ने जो वेद भाष्य किया है उस में यही विशेषता है कि शब्दों के यौगिक अर्थ किये गये हैं।

याद रखना चाहिये कि वर्त्तमान सृष्टि और वेदों की उत्पत्ति को एक अरब ९७ किरोड़ वर्ष के लगभग हो चुके। इस भारी समय में अनेक परिवर्तन हुये। शब्दों पर इतिहास का प्रभाव पड़ा और उनके अर्थ बदल गये। इसलिये लौकिक संस्कृत कोष से प्राचीन वेदों के अर्थ करने अन्याय हैं। यदि ठीक २ अर्थ किये जायं तो वेदों में मनुष्य की उन्नति के अमूल्य साधन दिये हैं। इनके पठन पाठन का उद्योग से प्रचार करना चाहिये। वेदों में कुछ मंत्र ईश्वर प्रार्थना के हैं, कुछ में सृष्टि के नियम हैं और कुछ में कर्त्तव्यों की विधि और अकर्त्तव्यों का निषेध है।

विश्वानि देव सवितर्दुरितानि परासुव।

यद्भद्रं तन्न आसुव। (प्रार्थना)

सूर्य्य एकाकी चरति चन्द्रमा जायते पुनः। अग्निर्हिमस्य भेषजं भूमिरावपनं महत्। य० २३।१०

(सृष्टिनियम)

अर्थ-सूर्य्य अपनी कीली पर घूमता है, चन्द्रमा पृथ्वी के चारों ओर घूमता है। आग ठण्ड का इलाज है। पृथ्वी पर बीज बोना चाहिये।

संगच्छध्वं संवदध्वं संवो मनांसि जानताम्।

ऋग्वेद ८।८।४६। २

विधि

मेल करके रहो, साथ वार्त्तालाप करो और एक से विचार रक्खो।

हम यहाँ वेदों के कुछ आदेशों को नमूने के लिये देते हैं जिससे पता लग जाय कि मनुष्य के हित के लिये वेदों में कैसी अच्छी अच्छी बातें दी हुई हैं:—

(१) दृष्ट्वारूपे व्याकरोत्सत्यानृते प्रजापतिः। अश्रद्धा-मनृते दधाच्छ्रद्धा ꣳ सत्ये प्रजापतिः॥ यजु० १६।७७॥

अर्थ-ईश्वर ने सत्य और झूठ को अलग २ करके दिखा दिया है। मनुष्यों को चाहिये कि सत्य में श्रद्धा रक्खें और झूठ में कभी श्रद्धा न करें।

नोट-बहुत से लोग झूठी बातों में श्रद्धा करना भी अच्छा समझते हैं। वेद भगवान् का उपदेश है कि श्रद्धा केवल उस बात में होनी चाहिये जो सच है। झूठ में कभी श्रद्धा नहीं करनी चाहिये।

(२) दृते दृꣳह मा मित्रस्य मा चक्षुषा सर्वाणि भूतानि समीक्षन्ताम् । मित्रस्याहं चक्षुषा सर्वाणि भूतानि समीक्षे । मित्रस्य चक्षुषा समीक्षामहे । य० ३६।१८॥

अर्थ—हे ईश्वर आप मुझे सुखी करें। संसार के सब प्राणी मुझे मित्र समान देखें। मैं सब को मित्र की आंख से देखूं। हम सब मित्र की दृष्टि से परस्पर एक दूसरे को देखें।

(३) न वा उ देवाः क्षुधमिद्वधं ददुरुताशितमुप गच्छन्ति मृत्यवः। उतोरयिः पृणतो नोप दस्यत्युता पृणन्मर्डितारं न विन्दते। ऋ० १०।११७।१ ॥

अर्थ-देवों ने भूख को मृत्यु के समान नहीं बनाया। जो पेट भर खाते हैं वह भी मरते हैं। दानी लोगों का धन कभी क्षय नहीं होता। जो दान नहीं देता उसको कुछ सुख प्राप्त नहीं होता।

(४) य आध्राय चकमानाय पित्वोऽन्नवान्त्सन्रफिता-येाप जग्मुषे। स्थिरं मनः कृणुते सेवते पुरोतो चित्स मर्डितारं न विन्दते। ऋक् १०।११७।२ ॥

अर्थ-उस अन्न वाले मनुष्य को कभी सुख नहीं होता जो भूखे दरिद्र मनुष्य के आने पर अपना मन कठोर कर लेता है और उसे दान नहीं देता।

(५) आ त्वाहार्षमन्तरेधि ध्रुवस्तिष्ठाविचाचलिः ।
विशस्त्वा सर्वा वाञ्छन्तु मात्वद्राष्ट्रमधि भ्रशत् ॥
ऋ. १०।१७३। १ ॥

अर्थ-प्रजा लोग राजा से कहते हैं कि हे राजन्! हमने तुझ को अपना राजा चुना है। तू स्थिर और दृढ़चित्त होकर हम पर शासन कर। प्रजा के लोग तुझको प्रिय हों और तू राज से च्युत न हो।

(६) ब्रह्मचर्येण तपसा राजा राष्ट्रं विरक्षति।
आचार्यो ब्रह्मचर्येण ब्रह्मचारिणमिच्छति।
अथर्व ११।३।५।१७ ॥

अर्थ-ब्रह्मचर्य के प्रताप से ही राजा राज कर सकता है। और ब्रह्मचर्य के बल से ही आचार्य शिष्य को पढ़ा सकता है।

(७) ब्रह्मचर्येण तपसा देवा मृत्युमपाघ्नत।
इन्द्रोह ब्रह्मचर्येण देवेभ्यः स्वराभरत् ॥
अथर्व ११। ३। ५। १६ ॥

अर्थ-ब्रह्मचर्य के द्वारा ही विद्वान् मृत्यु को जीतने हैं और ब्रह्मचर्य के बल से ही राजा विद्वानों पर आधिपत्य प्राप्त करता है।

(८) सहृदयं सांमनस्यमविद्वेषं कृणोमि वः ।
अन्यो अन्यमभि हर्यत वत्सं जातमिघ्न्या ।
अथर्व । ३। ६। ३०। १ ॥

अर्थ-ईश्वर कहता है कि हे जीवो ! मैंने तुमको हृदय वाला और बुद्धि वाला तथा एक दूसरे से द्वेष न करने वाला बनाया है। तुम एक दूसरे के साथ इस प्रकार बर्ताव करो जैसे गौ अपने नये उत्पन्न हुये बछड़े के साथ में करती है।

(९) अनुव्रतः पितुः पुत्रो मात्रा भवतु संमनाः ।
जाया पत्ये मधुमतीं वाचंवदतु शान्तिवाम् ।
अथर्व ३ । ६ । ३० । २ ॥

अर्थ-पुत्र को चाहिये कि माता पिता की मन से आज्ञा माने। स्त्री को चाहिये कि सदा पति से मीठी वाणी बोले।

(१०) मा भ्राता भ्रातरं द्विक्षन् मा स्वसारमुतस्वसा।
सम्यञ्चः सव्रता भूत्वा वाचं वदत भद्रया ।
अथर्व ३ । ६ । ३० । ३ ॥

अर्थ-भाई को भाई से और बहिन को बहिन से द्वेष नहीं करना चाहिये। सब लोगों को चाहिये कि परस्पर प्रेम से अच्छी वाणी बोले।

(११) इष्टं च वा एष पूर्तं च गृहाणामश्नाति यः ।
पूर्वोतिथेरश्नाति ॥ अथर्व ९ । ३ । ३ । १ ॥

अर्थ-जो बिना अतिथि के खिलाये भोजन कर लेता है उसके घर का यश आदि सब नष्ट हो जाता है।

(१२) एष वा अतिथिर्यच्छ्रोत्रियस्तस्मात् पूर्वो नाश्नीयात् ॥ अथर्व । १ । ३ । ३ । ७ ॥

अर्थ-यदि किसी के घर कोई वेदपाठी अतिथि आवे तो उसके भोजन करने से पूर्व भोजन नहीं करना चाहिये।

वेदों में जीवन के प्रत्येक विभाग के लिये उचित और कल्याणप्रद शिक्षायें हैं जिनका उल्लेख यहां नहीं किया जा सकता। स्मृति आदि सच्छास्त्रों में जो शिक्षायें हैं वह भी बीज रूप से वेदों से ही ली गई हैं। इसलिये ब्राह्मण ग्रन्थ, दर्शन, उपनिषदें, स्मृतियाँ आदि सभी ग्रन्थ परतः प्रमाण हैं, अर्थात् जो बात उन में वेदों के अनुकूल है वह माननीय है। जो वेदों के विरुद्ध है वह माननीय नहीं है। जिस समय बाइबिल, क़ुरान आदि पुस्तकें लिखी गईं थीं उस समय भी वैदिक शिक्षा किसी न किसी रूप में उन देशों में प्रचलित थी। केवल भेद इतना था कि कुछ शिक्षायें भ्रम के कारण दूषित हो गई थीं। इसलिये क़ुरान और बाइबिल आदि में भी उत्तम शिक्षायें किसी न किसी साधन द्वारा वेदों से आई हैं। हाँ उनके साथ लिखने वालों के क़िस्से कहानियाँ और उनकी बहुत सी भूलें भी दी हुई हैं, जिनके कारण शुद्ध वदिक धर्म की शिक्षा दोष युक्त हो गई है उदाहरण के लिये क़ुरान शरीफ़ में लिखा है कि (१) ईश्वर एक हैं (२) मूर्ति नहीं पूजनी चाहिये (३) शराब नहीं पीना चाहिये। (४) दया करनी चाहिये। यह सब वेदों की शिक्षा है जो क़ुरान शरीफ़ के लिखे जाने से बहुत काल पूर्व विद्यमान थी। परन्तु इसके साथ ही मुहम्मद साहब का पैग़म्बर होना, काले पत्थर को

पूजना, गौ आदि पशुओं को मारना, बहिश्त में शराब की आशा रखना आदि बातें लोगों ने स्वार्थवश मिलादी हैं। जिनके कारण वैदिक शुद्ध शिक्षाओं का भी बुरा फल निकलता है। मनुष्यों का कल्याण तभी होगा जब शुद्ध वैदिक धर्म का प्रचार होगा।

तीसरा अध्याय

नैत्यिक और नैमित्तिक यज्ञ तथा संस्कार

आर्यसमाज वेदादि सत् शास्त्रों के आधार पर पांच नैत्यिक कर्मों को मानता है जिनको पंचमहायज्ञ कहते हैं। मनुस्मृति में लिखा है:—

ऋषियज्ञं देवयज्ञं भूतयज्ञं च सर्वदा।
नृयज्ञं पितृयज्ञं च यथाशक्ति न हापयेत ॥४।२१॥

अध्यापनं ब्रह्मयज्ञः पितृयज्ञश्च तर्पणम्।
होमो दैवोबलिर्भौतो नृयज्ञोऽतिथि पूजनम् ॥३।७०॥

अर्थात् पहला ब्रह्मयज्ञ, देवयज्ञ, भूतयज्ञ, नृयज्ञ और पितृयज्ञ पांच नित्य कर्म हैं।

पहला ब्रह्मयज्ञ या ऋषि यज्ञ है। इसका अर्थ है ईश्वर पूजा और वेदाध्ययन। ईश्वर पूजा के तीन भाग हैं। स्तुति, प्रार्थना, उपासना। ईश्वर के गुणों का वर्णन करना स्तुति

है। ईश्वर से अपने कर्त्तव्य पालन की सहायता मांगना प्रार्थना है और ईश्वर के चिन्तमन में मग्न होना उपासना है। अपने शरीर तथा सृष्टि के निर्माण पर विचार करने से ईश्वर के गुणों का अनुभव होता है। जीव अपनी अल्पज्ञता और ईश्वर की महत्ता का विचार करके ईश्वर से सहाय के लिये प्रार्थना करता है। और जब संसार की वस्तुयें उसके आनन्द का साधन प्रमाणित नहीं होती तो वह परमात्मा में मग्न होकर आनन्द प्राप्त करना चाहता है यही उपासना है। स्तुति-प्रार्थना और उपासना की पहली सीढ़ी सन्ध्या है जो प्रातःकाल और सांयकाल करनी चाहिये।

ब्रह्मयज्ञ का दूसरा भाग वेद पाठ है जो प्रत्येक आर्य को प्रातःकाल करना चाहिये। मूर्त्तिपूजा वेद विरुद्ध और युक्ति शून्य है। जो लोग संध्या के स्थान में मूर्त्ति पूजते हैं वह भूल करते हैं। पहले काल में मूर्त्ति नहीं पूजी जाती थीं। लोगों ने जब रामचन्द्र जी और श्री कृष्ण जी आदि को अवतार मानना आरम्भ किया तो उनकी मूर्त्तियां बनाकर पूजने लगे। इस प्रकार ईश्वर पूजा छूट गई और मूर्त्तिपूजा प्रचलित हुई। ईश्वर की तो कोई मूर्त्ति हो ही नहीं सकती क्योंकि ईश्वर निराकार है। जो लोग रामचन्द्र को अवतार मानते हैं उनको भी मूर्त्ति नहीं पूजनी चाहिये। क्योंकि यदि कल्पना के लिये मान भी लिया जाय कि ईश्वर ने रामचन्द्र जी के शरीर में अवतार लिया तो रामचन्द्र जी की मृत्यु पर

उस अवतार का भी अन्त हो गया अब उसकी पूजा कैसी। कुछ लोग कहते हैं कि ईश्वर सब स्थान पर है इसलिये मूर्त्ति में भी है। यह सच है कि ईश्वर मूर्त्ति में भी है पर जीव तो मूर्त्ति में नहीं है। ईश्वर प्राप्ति वहां होगी जहाँ जीव और ईश्वर दोनों हों। यह केवल अपने हृदय में ही हो सकता है। मूर्त्तिपूजा ने संसार की बहुत हानियां की हैं। हम यहां कुछ का वर्णन करते हैं:—

(१) सैकड़ों विशाल मन्दिर मूर्तियों के लिये बनाये गये हैं ! और जो रुपया तथा भक्ति मनुष्यों के दुख दूर करने में लगनी चाहिये वह मूर्त्तियों की सजधज में लगती है।

(२) अल्प मूर्त्तियों पर भरोसा करने से मनुष्य में ईश्वर विश्वास कम होकर आत्मिक बल कम होता है और अन्ध विश्वास की प्रथा बढ़ जाती है। लोग समझने लगते हैं कि अमुक महादेव म्लेच्छ को दर्शन न देने के अर्थ कुए में कूद पड़े इत्यादि इत्यादि।

(३) जो जातियां प्रत्येक कंकड़ या झाड़ी को उपास्य-देव मानकर पूजती हैं वह उन जातियों से सदा पिटती रहती हैं जो उन पत्थरों को पैरों से ठकुराती हैं।

(४) मूर्त्तिपूजने वाले ईश्वर को भी अपने समान सोने वाला, खाने वाला, पीने वाला मानते हैं। भोग लगाते हैं, गर्मियों में पंखा करते हैं, जाड़ों में रज़ाई उढ़ाते हैं, रात को सुलाते हैं, प्रातःकाल को जगाते हैं। इस प्रकार तब वह



[भारत-केसरी लाला लाजपतराय]

ईश्वर को अपने समान इच्छा और आवश्यकताओं वाला मानते हैं वह ईश्वर से किस सहायता की आशा कर सकते हैं।

दूसरा महायज्ञ देवयज्ञ है। सुगन्ध युक्त पदार्थों से सायं प्रातः हवन करना देवयज्ञ है। तीसरा भूतयज्ञ है। चीटीं, कौए, कुत्ते, गाय आदि को रोटी देना भूतयज्ञ अर्थात् बलि-वैश्व देवयज्ञ कहलाता है। माता पिता की सेवा सुश्रुषा करने को पितृयज्ञ कहते हैं। बहुत लोग मरे हुये पितरों को पानी देना और उनके नाम पर ब्राह्मणों को भोजन कराना पितृयज्ञ समझते हैं। परन्तु यह भूल है। जीव तो मरने के पीछे दूसरा शरीर धारण कर लेता हैं फिर मरे हुओं के लिये पानी और खाना पहुंचाना ही व्यर्थ है।

पांचवां यज्ञ नृयज्ञ है। अतिथि अर्थात् विद्वान, साधु, पण्डित तथा परोपकारी सज्जनों का भोजन आदि से सत्कार करना अतिथि या नृयज्ञ है।

यह हुये नैत्यिक यज्ञ। नैमित्तिक यज्ञ विशेष कर नवश-स्येष्टि और संवत्सरेष्टि यज्ञ हैं जो नई फसल के पकने या वर्ष के आरम्भ होने पर यज्ञ करने को कहते हैं। इनके अतिरिक्त राजसूय, अश्वमेध आदि यज्ञ हैं जो राज्याभिषेक आदि शुभ अवसरों पर किये जाते हैं। मनुष्य के जीवन के भिन्न भिन्न अवसरों पर जो संस्कार किये जाते हैं वह भी नैमित्तिक यज्ञ हैं उनके नाम यह हैं (१) गर्भाधान संस्कार

(२) पुंसवन (३) सीमन्तोन्नयन (४) जातकर्म (५) नामकरण (६) निष्क्रमण (७) अन्नप्राशन (८) मुण्डन (९) कर्णवेध (१०) यज्ञोपवीत (११) वेदारम्भ (१२) समावर्त्तन (१३) विवाह (१४) वान प्रस्थ (१५) सन्यास (१६) देहान्त ।

पहले तीन संस्कार जन्म से पहले गर्भ की रक्षा के निमित्त किये जाते हैं। आगे के छः बचपन में माता-पिता के घर होते हैं। दसवां और ग्यारहवां ब्रह्मचर्याश्रम और विद्याध्ययन से सम्बन्ध रखते हैं। बारहवां संस्कार ब्रह्मचर्य्य के अन्त में और तेरहवां गृहस्थाश्रम के आरम्भ में होता है। चौदहवां और पंद्रहवां वानप्रस्थ और सन्यासाश्रम के आरंभ में होते हैं। सोलहवां देहान्त संस्कार मृत्यु के पश्चात् होता है। इन सब के आरम्भ में ईश्वर प्रार्थना और हवन सामान्य कर्म हैं। इसके पश्चात् उन उन संस्कारों की विधि की जाती है। इसका मुख्य प्रयोजन यह है कि आत्मा को उच्च कर्म करने की योग्यता प्रदान होती रहे। इसमें आगे के लिये व्रत करने की आवश्यकता होती है।

चौथा अध्याय

समाज संगठन

आर्य्य समाज या वेदों के सिद्धान्तों के अनुसार मनुष्य-समाज को चार वर्णों में बांटा गया है (१) ब्राह्मण, (२) क्षत्रिय

(३) वैश्य (४) शूद्र। मनुस्मृति में इन वर्णों के निम्न प्रकार से कर्त्तव्य दिये गये हैं:—

अध्यापनमध्ययनं यजनं याजनं तथा।

दानं प्रति ग्रहश्चैव ब्राह्मणानामकल्पयत्। १। ८८॥

वेद पढ़ना, पढ़ाना, यज्ञ करना, यज्ञ कराना, दान लेना और देना यह ब्राह्मणों के कर्त्तव्य हैं। अध्यापकों, नये आविष्कार करने वाले तत्ववेत्ताओं, धर्म और न्याय की व्यवस्था देने वाले जजों और वकीलों की गणना ब्राह्मणों में है।

प्रजानां रक्षणं दानमिज्याध्यायनमेव च।

विषयेष्वप्रसक्तिश्च क्षत्रियस्य समासतः॥ १। ८९

क्षत्रियों का कर्त्तव्य पढ़ने, हवन करने, दान देने आदि के अतिरिक्त मुख्यतः प्रजा की रक्षा करना है अर्थात् सेना के सैनिक, रणपोतों के संचालक, रणवायुयानों के व्यवस्थापक, पुलिस के कर्मचारी आदि सब क्षत्रिय हैं।

पशूनां रक्षणं दानमिज्याध्ययनमेव च।

वणिक्पथं कुसीदं च वैश्यस्य कृषि मेव च॥ १। ९०॥

पढ़ने, दान देने तथा हवन करने आदि के अतिरिक्त पशु-पालन, कला कौशल, कृषि आदि से पदार्थों को उत्पन्न करना और व्यापार यह वैश्य का कर्त्तव्य है। इस प्रकार अहीर, गड़रिये, कुम्हार, लोहार, सुनार, थवई, बढ़ई, ठठेरे, तेली, बजाज़, आदि सभी वैश्य वर्ण हैं। आज कल हिन्दू जाति इन में से कई पेशे वालों को नीच समझती है। परन्तु यह बात

वैदिक सिद्धान्तों के विरुद्ध है। वस्तुतः यह सभी पेशे वाले उच्च और श्रेष्ठ हैं।

एकमेव तु शूद्रस्य प्रभु कर्म समादिशत्।
एतेषामेव वर्णानां शुश्रूषा मन सूयया ॥ १ । ९१ ॥

शुद्र उसको कहते हैं जिसमें ऊपर के किसी कर्त्तव्य के पालने की योग्यता नहीं है। इसलिये शूद्र का केवल एक कर्त्तव्य है कि वह उच्च वर्ण के कर्त्तव्य पालने में उनकी सेवा शुश्रूषा करें, क्योंकि वह स्वयं कुछ नहीं कर सकता है, केवल दूसरों की आज्ञा पालन कर सकता है, जैसे पानी भरना, घर शुद्ध करना, वस्त्र धोना, भोजन बनाना आदि। परन्तु शूद्रों से न तो घृणा करनी चाहिये और न उनको अछूत समझना चाहिये। शूद्र केवल इसलिये शूद्र है कि वह अन्य वर्णों के कार्य्य करने की योग्यता नहीं रखता। वह नीच नहीं है न नीच काम करता है। नीच काम वह है जिसके करने से समाज को हानि पहुँचती हो, और जिसके लिये आप दूसरे को कह सकें "भाई यह नीच कर्म है। इसे मत करो"। नीच काम हैं झूठ बोलना, चोरी करना, डाका मारना, व्यभिचार करना। इनके लिये आप कह सकते हैं कि "न करो"। परन्तु जिन कार्यों को आपने नीच समझा है जैसे कपड़ा धोना, झाड़ू लगाना, शौचालय को शुद्ध करना। यह नीच नहीं हैं। इनके करने से समाज को कोई हानि नहीं और न करने से समस्त समाज को दुःख पहुँचता है। अतः यह नीच कर्म नहीं और न

इनके करने वाले नीच हैं। रोटी पकाने का काम शूद्र का हैं क्योंकि आपके बताने के अनुसार वह रोटी पका सकता है। आज कल हिन्दूजाति में रुटिकरों को ब्राह्मण कहा जाता है यह भूल है और इस से कई हानियाँ हो रही हैं। एक तो ब्राह्मण कहलाने की इच्छा करने वाले अपने वर्ण के अनुकूल कर्मों का पालन न करके रोटी पकाने, पानी पिलाने आदि का कार्य्य करते रहते हैं और इस प्रकार 'ब्राह्मणत्व' का लोप हो गया है। दूसरे लोग इन कामों के लिये शूद्रों को न ढूंढ़ कर ब्राह्मणों को ढूंढते हैं अतः ब्राह्मणों का मान कम होता जाता है। वस्तुतः कर्त्तव्यों पर विचार करने से पता चलता है कि ब्राह्मण, क्षत्रिय वैश्य और शूद्र जन्म से नहीं किन्तु गुण, कर्म, स्वभाव से होते हैं। ब्राह्मण का बेटा शूद्र, क्षत्रिय, वैश्य या ब्राह्मण हो सकता है और शूद्र का लड़का भी शूद्र, क्षत्रिय, वैश्य या ब्राह्मण हो सकता है। जैसे डाक्टर के लड़के का डाक्टर ही होना, मास्टर के लड़के का मास्टर ही होना अवश्यम्भावी नहीं इसी प्रकार वर्णों को समझना चाहिये। हिन्दुओं में जन्म से जाति मानने के कारण संगठन नहीं रहा, मिथ्या जाति-अभिमान बढ़ गया और वास्तविक योग्यता जाती रही। परस्पर घृणा होने लगी। अब इस रोग को शीघ्र ही दूर करना चाहिये।

प्रत्येक वर्ण के दो भाग हैं एक स्त्री और दूसरा पुरुष। स्त्री जाति को भी नीच न समझना चाहिये, विवाह आदि संस्कारों

तथा गृहास्थाश्रम के कामों में उनका समान अधिकार है। स्त्रियों के वह सब संस्कार होने चाहियें जो पुरुषों के अर्थात् यज्ञोपवीत्, वेदारम्भ, सन्यास आदि भी स्त्रियों को विहित हैं। यह झूठ है कि स्त्रियों को वेद पढ़ने का अधिकार नहीं। प्राचीन काल में स्त्रियाँ वद पढ़ती थीं और मंत्रों की ऋषिकायें तक होती थीं। स्त्रियों को नीच भी नहीं समझना चाहिये।

समाज का आधार विवाह संस्कार के गौरव पर है। क्योंकि विवाह संस्कार द्वारा स्त्री-पुरुष का मेल होता है। आर्य्य समाज का सिद्धान्त है कि १६ वर्ष की कन्या, २५ वर्ष का पुरुष; १८ वर्ष की कन्या ३६ वर्ष का पुरुष; या २४ वर्ष की कन्या और ४८ वर्ष का पुरुष विवाह योग्य होने हैं। आज कल जो बालकों के विवाह हो रहे हैं वह शास्त्राज्ञा के विरुद्ध और इसलिये अधर्म हैं। बूढ़े पुरुषों को लड़कियों के साथ विवाह करना भी अधर्म है। एक स्त्री का एक ही पुरुष से और एक पुरुष का एक ही स्त्री से विवाह होना चाहिये। हाँ, यदि स्त्री विधवा हो जाय या कोई पुरुष रडुआ हो जाय और वह अक्षतयोनि या अक्षत वीर्य हो तो उनका उनकी इच्छा के अनुसार विवाह हो सकता है। बाल विवाह के कारण जो विधवायें हो रही हैं इन से समाज को बड़ी हानि हो रही है। व्यभिचार, और भ्रूण हत्या बढ़ रही है। हिन्दू स्त्रियाँ मुसलमान और ईसाई बन रही हैं। इनका एक मात्र उपाय यह है कि इच्छुक विधवाओं के विवाह किये जायँ। यह विधवायें सामाजिक

कुरीतियों के कारण हुई हैं। वह सामाजिक कुरीतियाँ अभी बन्द नहीं हुई। इसलिये समाज को अपने हित पर विचार करके विधवाओं की दशा सुधारना चाहिये। यदि किसी पुरुष को विष दे दिया जाय तो उसको साधारण भोजन से लाभ न होगा विशेष औषधि ही देनी पड़ेगी। इसी प्रकार विधवाओं की संख्या अधिकतर बाल विवाह रूपि विष के कारण बढ़ी है। इन को कम करने के लिये विशेष अवस्थाओं में विवाह की आज्ञा देनी होगी। समाज के हितैषियों को अपने हृदय पर हाथ रख के सोचना चाहिये। हम कह चुके हैं कि स्त्रियों और पुरुषों का अधिकार समान है। स्त्री पुरुष की अर्द्धाङ्गिनी है। इसलिये विवाह आदि में जो अधिकार पुरुष को हैं वह स्त्री को भी होने चाहियें। पुरुषों को चाहिये कि एक से अधिक स्त्री से विवाह न करें और जब तक बूढ़े रंडुए अपना पुनर्विवाह नहीं छोड़ते, न्याय चाहता है कि बाल विधवाओं को तो अवश्य ही पुनर्विवाह की आज्ञा देनी चाहिये। स्त्रियों को मृतक पति की लाश के साथ जल जाना वेद विरुद्ध है। इस लिये आर्य्यसमाज सती की प्रथा को घृणा की दृष्टि से देखता है। 'सती' वह नहीं है जो मृत पति के शव के साथ जल जाती है किन्तु वह है जो पातिव्रत धर्म का पालन करती और अपने कर्त्तव्यों से विमुख नहीं होती। हाँ एक बात स्पष्ट है। आर्य्यसमाज मानता है कि स्त्री को पति की उतनी भक्ति करनी चाहिये जितनी पति के लिये योग्य है। पति को ईश्वर

नहीं मानना चाहिये। जो लोग समझते हैं कि पतिव्रता स्त्री को ईश्वर की भी पूजा नहीं करनी चाहिये वह भूलते हैं। स्त्री को चाहिये कि पति को पति और ईश्वर को ईश्वर समझे और यदि पति अनाचार या पाप करता हो तो उस में सम्मिलित न हो।

आर्य्यसमाज धर्म को काल विशेष या देश विशेष से घिरा नहीं मानता। जिस प्रकार ईश्वर सत्युग में था वैसा त्रेता में भी था, वैसा ही द्वापर में और वैसा ही कलियुग में। इस प्रकार जो ईश्वर इंगलैण्ड में है वही भारतवर्ष में, वही अरब में और वही चीन में। इसलिये धर्म के सत्यभाषण आदि जो नियम सतयुग में थे वह अब भी हैं। इंगलैण्ड आदि देशों में जाने से पाप नहीं होता, न समुद्र पार करना पाप है। इंगलैण्ड में रह कर भी मनुष्य उसी प्रकार धार्मिक या पापी हो सकता है जैसा प्रयाग में रह कर। इसलिये किसी मनुष्य को केवल इसलिये प्रायश्चित नहीं करना चाहिये कि वह यूरोप या अमेरिका हो आया है। हाँ यदि कोई पाप किया है तो प्रायश्चित करने में हानि भी नहीं है। विदेशों में तो आर्य्य लोगों को अवश्य जाना चाहिये। इससे व्यापार और ज्ञान की वृद्धि होगी। पाप कुछ भी न होगा।

तीसरा भाग

आर्य्य समाज के कार्य्य

पहला अध्याय

वैदिक धर्म प्रचार

ऋषि दयानन्द ने १८७५ ई० में आर्य्यसमाज की संस्थापना की। उस समय से अब तक आर्य्यसमाज वैदिक धर्म प्रचार का भरसक प्रयत्न करता रहा है। ऋषि ने अपने जीवन काल में वैदिक पाठशालायें इसीलिये खोली थीं कि वेदों को लोग पढ़ने लगें। वस्तुतः उस समय वेदों का प्रचार बिलकुल उठ चुका था। जिस समय ऋषि ने काशी के पण्डितों से शास्त्रार्थ किया उस समय संस्कृत के एक मात्र केन्द्र काशी में भी सम्पूर्ण वेदों के पुस्तक विद्यमान न थे और पण्डितों ने इधर उधर के पृष्ठों को ही वेद समझ लिया था। ऋषि दयानन्द ने खोज करके वेदों का संग्रह किया और एक वैदिक यंत्रालय केवल इसीलिये खोला कि वेद और वैदिक साहित्य सम्बन्धी पुस्तकें प्रकाशित हों। स्वयं उन्होंने वेद भाष्य करना आरम्भ किया। वह अपने

जीवन में ऋग्वेद के सातवें मण्डल के कुछ भाग तक और यजुर्वेद का सम्पूर्ण भाष्य कर गये। ऋग्वेदादि भाष्य भूमिका में उन्होंने उन आक्षेपों का उत्तर दिया जो बहुधा वेदों पर किये जाते हैं। ऋषि की मृत्यु के पश्चात् श्री पं० तुलसीरामजी स्वामी मेरठ ने सामवेद का सम्पूर्ण भाष्य और पं० क्षेमकरणदास जी त्रिवेदी, लूकरगंज प्रयाग ने अथर्ववेद तथा गोपथ ब्राह्मण का सम्पूर्ण भाष्य किया। ऋग्वेद के शेष भाग का कुछ भाष्य श्री पं० शिवशङ्कर जी काव्यतीर्थ दरभंगा ने करना आरम्भ किया था परन्तु उनकी मृत्यु हो गयी। इसका बहुत कुछ भाग श्री आर्य्य मुनि जी धर्मकूप काशी कर रहे हैं बहुत कुछ हो गया है। कुछ शेष रह गया है। वेद के मूल पुस्तक आजकल पहले की अपेक्षा बहुत पढ़े जाते हैं और भारतवर्ष के कई छाप ख़ानों में छपे हैं। इस समय प्रत्येक नगर में वेदों की कई कई जिल्दें मिलेंगी।

यह कहना अनुचित न होगा कि हिन्दू लोगों ने भागवत, महाभारत, रामायण, गीता आदि को पढ़ना प्रारम्भ कर दिया था और जिन वेदों पर इन पुस्तकों की भी स्थिति है उनको सर्वथा त्याग रक्खा था। हिन्दू लोग जड़ को न सींच कर पत्तों को सींचने लगे थे। उन्होंने तुलसीकृत रामायण को ही सर्वस्व समझ लिया था। यह ऋषि दयानन्द का ही प्रताप था कि वेदों का पठन पाठन फिर से आरम्भ हुआ। यद्यपि बहुत से वेदज्ञ उत्पन्न नहीं हुये तथापि वेदों

के विषय में पहले की अपेक्षा सहस्र गुनी चरचा बढ़ गई है। आर्य्यसमाज वैदिक धर्म प्रचार की एक जीती जागती संस्था है। उसके उपदेशक नियमित रूप से वेद प्रचार किया करते हैं। पहले स्त्री और शूद्र को तो वेद पढ़ने का निषेध ही था। क्षत्रिय और वैश्य पढ़ते न थे। ब्राह्मणों में भी लाखों और करोड़ों में एक निकलता था जिसने वेद के पुस्तक के दर्शन भी किये हों। परन्तु अब कम से कम कई लाख आर्य्य सामाजिक वेद मंत्रों को पढ़ते हैं। आर्य्यसमाज की देखा देखी सनातन धर्म सभा ने भी वेदों के भाष्य आरम्भ किये हैं और अब उनके प्लेटफार्मों से बिना स्त्री या शूद्र के विचार के वेद मंत्र उच्चारित होते हैं। यदि इसी प्रकार रुचि बनी रही तो संशय नहीं कि बहुत शीघ्र वेदों के पण्डित उत्पन्न होने लगेंगे। मनुष्यों का दृष्टिकोण तो अब भी वेदों के विषय में बहुत कुछ बदल चुका है। पहले इनको गड़रियों के गीत समझा जाता था अब इन को अधिक गौरवान्वित समझा जाता है। वैदिक साहित्य अर्थात् ब्राह्मणग्रन्थ, उपनिषद्, दर्शन आदि का भी बहुत कुछ प्रचार हो रहा है। क्या यह आनन्द की बात नहीं है।

दूसरा अध्याय

विद्या प्रचार

आर्य्यसमाज का विचार है कि संसार में मतमतान्तरों के झगड़े अविद्या से फैलते हैं। यदि विद्या का प्रचार अधिक हो तो लोगों में पक्षपात की मात्रा कम हो सकती है और धर्म तथा सदाचार उन्नत दशा को प्राप्त हो सकते हैं। इसलिये आर्य्यसमाज आरम्भ से ही शिक्षा का उद्योग करता रहा है। यह तो हम कई स्थानों पर कह चुके हैं कि ऋषि दयानन्द ने अपने जीवन काल में वैदिक पाठशालायें खोली थीं। परन्तु उनको योग्य अध्यापक न मिलने के कारण वह बन्द कर देनी पड़ी। ऋषि की मृत्यु के पश्चात् ही उनकी स्मृति में श्रीमद्दयानन्दएङ्गलो वैदिक कालेज की नींव डाली गई जो आजकल डी. ए. वी. कालेज लाहौर के नाम से प्रसिद्ध है। यह पंजाब में बहुत बड़ा कालेज है और विद्यार्थियों की संख्या के विचार से उत्तरी भारत में यह किसी से कम नहीं है। महात्मा हंसराज जी ने इस कालेज के खुलते ही अपना जीवन बिना किसी वेतन के इसको चलाने के लिये दान दिया था और उन्होंने जिस आत्मत्याग और प्रेम-भाव से कालेज का संचालन किया उसका उदाहरण इतिहास में कठिनाई से मिल सकेगा। श्रीयुत लालालाजपतिरायजी तथा अन्य कई सज्जन इस काम को अपने जीवन

के अन्य कामों की अपेक्षा उच्च समझते रहे। इस का प्रभाव यह पड़ा कि पंजाब में इस समय चार बड़े २ कालेज हैं अर्थात् मुल्तान, जालंधर, होशियारपुर और लाहौर। संयुक्त प्रान्त में कानपुर और देहरा दून के डी. ए. वी. कालेज उपस्थित हैं। दक्षिण में कोल्हा पुर का राजाराम कालेज वहां के नरेश की अनुमति से श्रीमती आर्य्य प्रतिनिधि सभा संयुक्त प्रान्त की अध्यक्षता में कार्य्य कर रहा है। इन कालिजों के अतिरिक्त डी. ए. वी. स्कूल हैं जो जाल के समान उत्तरी भारत में फैले हुये हैं। स्कूल और कालेजों में प्रायः वही पाठविधि रक्खी जाती है जो सरकारी शिक्षा विभाग से नियत होती है। हम केवल दो कार्य्य अपनी ओर से कर सकते हैं अर्थात् धार्मिक शिक्षा का कुछ प्रबन्ध करदें और शिक्षणालयों में में आर्य्य सामाजिक वायु मण्डल उत्पन्न करने का यत्न किया जाय। पंजाब में इस वायु मण्डल ने विचित्र कार्य्य किया। इसी का परिणाम था कि वहां आर्य्यसमाज का प्रभाव बहुत अधिक है।

परन्तु प्रायः ३० वर्ष हुये होंगे कि कुछ नेताओं के हृदय में यह बात उत्पन्न हुई कि केवल इस प्रकार की संस्थाओं से वैदिक शिक्षा की अधिक उन्नति नहीं होती, इस लिये ऋषि दयानन्द की बताई हुई स्कीम के अनुसार गुरुकुल खोलने चाहिये। ऋषि दयानन्द ने सत्यार्थ प्रकाश के तीसरे समुल्लास में शिक्षाक्रम का एक महत्वपूर्ण विवरण दिया है।

उनका कहना है कि पूर्ण ब्रह्मचर्य पालन उस समय तक नहीं हो सकता, जब तक प्राचीन रीति के अनुसार लड़के गुरुकुलों में नहीं भेजे जा सकते। वहाँ उनको अपनी शिक्षा समाप्ति के अन्त तक रहना चाहिये। इसलिये पंजाब प्रतिनिधि सभा ने **महात्मा मुंशीराम जी** वकील, जालंधर की प्रेरणा से जो आजकल **श्री स्वामी श्रद्धानन्द** जी के नाम से प्रसिद्ध हैं गुरुकुल खोलना निश्चित किया सबसे पहला गुरुकुल श्री पं० कृपाराम जी ने जो तत्पश्चात् संन्यास लेकर स्वामी दर्शनानन्द जी के नाम से प्रसिद्ध हुये बुलन्दशहर ज़िले में सिकन्दराबाद स्थान में खोला। फिर पंजाब प्रतिनिधि सभा की ओर से १९०१ ईसवी में काङ्गड़ी (हरिद्वार) में गुरुकुल खोला गया जो आज-कल सब से बड़ा गुरुकुल समझा जाता है। इस समय गंगा में बाढ़ आनेके कारण इस के भवनों को अकथनीय क्षति पहुँची है और पंजाब प्रतिनिधि सभा ने शायद गुरुकुल को कनखल ले जाना का निश्चय कर लिया है। संयुक्त प्रान्तीय आर्य्य प्रतिनिधि सभा ने अपने आधीन एक गुरुकुल १९०५ ई० में फ़रुख़ाबाद में गंगा के तट पर खोला। परन्तु थोड़े दिनों पश्चात् यह उठकर वृन्दावन (ज़िला मथुरा) में चला गया और अब तक उसी स्थान में चल रहा है। श्री पं० भगवानदीन जी तथा **श्री नारायण स्वामी** जी को इसका प्रसिद्ध संचालक समझना चाहिये। बम्बई प्रतिनिधि ने सेंण्टाक्रूज़ में गुरुकुल खोला है। इसके अतिरिक्त कई और गुरुकुल तथा महा विद्यालय



[“चाँद” से प्राप्त

कन्या महाविद्यालय जालन्धर की अध्यापिकायें।

हैं। काङ्गड़ी गुरुकुल की कई शाखायें हैं और वृन्दावन की भी एक शाखा सकीट (ज़ि० एटा) है।

जिस समय आर्य्यसमाज की स्थापना हुई थी उस समय स्त्री-जाति को पढ़ाने का कोई प्रबन्ध नहीं था। हिन्दू जाति स्त्रियों को पढ़ाने के सर्वथा विरुद्ध थी। वेद तो स्त्रियों की कथा ब्राह्मण पुरुषों तक को नहीं पढ़ाये जाते थे परन्तु स्त्रियों को अक्षर-बोध कराना भी पाप समझा जाता था। यदि कुछ कन्या-पाठशालायें थीं तो ईसाइयों की ओर से। परन्तु आर्य्यसमाज ने इस आवश्यकता को अनुभव किया। स्त्री-शिक्षा के बिना कोई जाति उन्नति कर ही नहीं सकती। अतः सब से प्रसिद्ध और सब से पहली कन्या शाला जालंधर में लाला देवराज जी के उद्योग से खोली गई। जिसको आजकल कन्यामहाविद्यालय कहते हैं। कुछ दिनों पीछे कन्याओं की शिक्षा ने इतना बल पकड़ा कि आजकल शायद कोई ऐसा प्रसिद्ध समाज हो जिस में कन्या पाठशाला न हो।

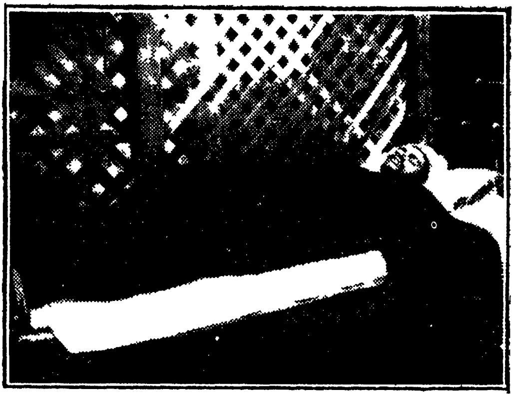
आर्य्यसमाज ने एक विचित्र और शोकजनक बात यह देखी कि हिन्दू जाति अपने अनाथ बच्चों का कोई प्रबन्ध नहीं करती। जब अकाल पड़ते हैं तो ईसाई लोग इन बच्चों को लेकर ईसाई बना लेते हैं। यह काम ईसाई लोग मुद्दतों से कर रहे थे। किसी जाति भक्त को यह नहीं सूझता था कि इस के लिये कुछ उपाय किया जाय। हिन्दूओं ने अपना राज विदेशियों से बचाने के लिये बहुत से युद्ध किये और

बहुत कुछ हाथ पैर मारे। परन्तु अपनी जाति तथा धर्म को बचाने के लिये थोड़ा भी उद्योग न किया। लाखों बच्चे भूख के मारे पेट भरने के लिये ईसाई हो गये। इसलिये अनाथालय खोलने का उद्योग किया गया। सब से पहला अनाथालय श्रीमद्दयानन्द अनाथालय फीरोजपुर में खोला गया। इसके पश्चात् कई अन्य अनाथालय खुल गये। इस समय अजमेर, आगरा, बरेली, लखनऊ, आदि अनेकों स्थानों में अनाथालय हैं जहाँ हिन्दूजाति के बच्चों की रक्षा की जाती है।

हिन्दू जाति में जातपांति के इतने झगड़े हैं कि इनका बहुत सा भाग अछूत समझा जाता है अर्थात् प्रतिष्ठित जाति के लोग उनका छूते तक नहीं। मद्रास और दक्षिण प्रान्तों में तो अछूतों के दर्शन से भी ब्राह्मण लोग पतित हो जाते हैं। फिर उनकी शिक्षा का प्रबन्ध करना तो बहुत दूर की बात है। आर्य्यसमाज ने पंजाब में मेघ और ओड जाति को अपने में मिलाकर उनकी शिक्षा का प्रबन्ध १८९९ ई० में ही आरम्भ कर दिया था। उस समय हिन्दूजाति के भद्र पुरुष इस बात को बड़ी घृणा से देखते थे। आर्य्यों को कुएं पर चढ़ने से रोकते थे। उनका भाव यह था कि यदि नीच जातियां पढ़ गईं तो हम भ्रष्ट हो जायँगे। हिन्दू जाति के इस बर्ताव ने आर्य्यसमाज के कार्य्य में बड़ी बाधा डाली और आर्य्यों को इसके कारण अनेक



कन्या-महाविद्यालय जालन्धर की कन्यायें सेवा, सुश्रुषा करना सीख रही हैं। ["चाँद" से प्राप्त]



[पं० रामचन्द्र जी मृत्यु शय्या पर बेहोश पड़े हैं]

“मेघों के उद्धार में अपनी झोंकी जान है।
जग को यह दिखला दिया यों होता बलिदान है॥”

(विभु)



Staff Captains Yuddh Prakas and Kripa
(Richardson)

युद्ध प्रकाश तथा कृपादेवी [देखो पृष्ठ १४०]

कठिनाइयाँ उठानी पड़ीं। परन्तु आर्य्य लोग अपने इस कार्य्य में डटे रहे। और जब कभी अवसर मिला इन्होंने अपनी उदारता दिखाई। लगभग दश वर्ष हुये होंगे कि महोबे में बाढ़ आई और वहां के महतरों के मकान बह गये। किसी ने उनको शरण न दी तो आर्य्यसमाज के मंत्री ने समाज मन्दिर का दरवाज़ा खोल दिया और वह लोग निःसंकोच मन्दिर में आ गये। इसी प्रकार मेरठ में पं० इन्द्र-मणि के उद्योग से महतर आदि के लिये पाठशालायें खोली गईं। थोड़े दिनों में हिन्दुओं के इस भाव में परिवर्त्तन हुआ। महात्मा गांधी ने अछूतोद्धार के लिये अपनी प्रबल आवाज़ उठाई। इस समय आर्य्यसमाज की ओर से अनेकों अछूत पाठशालायें खुली हैं जहां नीच कहलाये जानेवाले बच्चों को शिक्षा होती है। आर्य्यसमाज तो उनको अछूत कहने या उनकी पाठशालाओं को अछूत-पाठशाला कहने से भी घृणा करता है, इसलिये ऐसी पाठशालाओं का कल्याणी पाठ-शाला या श्रमजीवी-पाठशाला नाम रक्खा गया है। अछूतोद्धार का विशेष कार्य्य अब भी आर्य्यसमाज द्वारा ही हो रहा है, यद्यपि हिन्दू जाति के सुशिक्षित नेताओं ने अपना दृष्टिकोण बदल दिया है तो भी हिन्दू जनता की ओर से अब भी आपत्तियां उठाई जाती हैं। अभी दो साल हुये म० रामचन्द्र जी कश्मीर प्रान्त में अछूतों में कार्य करते हुये हिन्दू ठाकुरों के हाथ से मारे गये।

जो कुछ शिक्षा कार्य्य का वर्णन यहाँ किया गया वह आर्य्यसमाज की दृष्टि में अधिक संतोषजनक नहीं है। परन्तु आर्य्यसमाज की शक्ति इस समय बहुत कम है। आर्य्य-समाज की तो दृढ़ इच्छा यह है कि वह समस्त देश की शिक्षा का उचित प्रबन्ध कर दे जिससे अविद्यारूपी अन्धकार रहने ही न पावे। ईश्वर इस इच्छा की पूर्त्ति में सहायता दें।

तीसरा अध्याय

शुद्धि

एक समय था कि समस्त भूमण्डल पर वैदिक धर्म का प्रचार था। भारतवर्ष के ऋषि मुनि देश विदेश जाकर लोगों को वैदिक धर्म का उपदेश करते थे। परन्तु जब भारतवर्ष में ही आन्तरिक झगड़े उत्पन्न हुये तो भारतवर्ष को छोड़कर अन्य देशों में वैदिक धर्म का ह्रास हुआ और शनैः २ ईसाई, मुसलमान तथा अन्य धर्म प्रचलित हो गये। भारतवर्ष में भी कई मतमतान्तरों ने बल पकड़ा और वैदिक धर्म का यहाँ भी नाम मात्र ही रह गया। भेद केवल इतना अवश्य था कि भारतवर्ष के बाहर वैदिक धर्म का नाम भी न था। यहाँ नाम तो बना हुआ था। जब भारतवर्ष में राजनैतिक क्रान्तियाँ हुईं और यहाँ के क्षत्रियों का बल कम हुआ तो मुसलमान और

ईसाइयों ने आकर अपना अड्डा जमाया। उस समय वैदिक धर्मियों में इतनी योग्यता तो थी नहीं कि बाहर से आनेवालों को अपने धर्म का उपदेश करते और उनकी रुचि धर्म की ओर लगाते। इन्होंने अपनी रक्षा के लिये कुछ कल्पित नियम बना लिये, जैसे:—

(१) विदेश जाना पाप है।

(२) म्लेच्छों को न छूना चाहिये। न उनके हाथ का छुआ खाना चाहिये।

(३) जो म्लेच्छों का खाना खालेगा वह और उसके वंशज सदा के लिये जाति से बाहर कर दिये जायंगे।

यह उपाय शायद आत्म-रक्षा के लिये किये गये थे। परन्तु इनसे हिन्दुओं की निर्बलता का पता चलता था। इस-लिये हिन्दुओं के शत्रुओं ने इन पर घोर आक्रमण किये। मुसलमान लोग चालाकी या बल से हिन्दू व्यक्तियों को अपना छुआ खाना खिला देते थे और हिन्दूजाति उन व्यक्तियों को अपने से अलग कर देती थी। ईसाई पादरियों ने कुओं में चुपके से रात में रोटियाँ डाल दीं और जब प्रातःकाल ग्राम के लोगों ने उन कुओं का पानी पी लिया तो उन्होंने प्रसिद्ध कर दिया कि अब यह हिन्दू नहीं रहे। क्योंकि इन्होंने ईसाई रोटियों का छुआ पानी पी लिया है। इस प्रकार जो हिन्दू अपनी इच्छा से धर्म न छोड़ते उनसे चालाकी से धर्म छुड़ा लिया जाता। इस समय मिस्टर रिचर्डसन और

उनकी स्त्री, जो कि स्काटलैंड के मिश्नरी हैं, पंडित और पंडितानी का भेष बना कर प्रचार कर रहे हैं। उन्होंने अपना नाम युद्धप्रकाश तथा कृपा देवी रख लिया है। [देखो चित्र १३७ पृष्ठ के सामने] इस प्रकार शनैः २ एक तिहाई भारतवासी वैदिक धर्म से निकल गये और इनकी संख्या दिन प्रति दिन कम होती जाती है।

यह बात नहीं थी कि लोग वैदिक धर्म की भलाइयों का अनुभव नहीं करते थे। कई बार प्रसिद्ध मुसलमानों ने चाहा कि हम वैदिक धर्मी हो जायँ। अकबर प्रायः चाहता था कि मैं हिन्दू हो जाऊँ। औरङ्गजेब के बड़े भाई दारा को तो हिन्दू धर्म के प्रेम के कारण ही अपने प्राण देने पड़े थे। परन्तु उस समय हिन्दू नेताओं की सिट्टी भूली हुई थी। वह धर्म के मूल तत्वों को न समझ कर केवल छूत छात और खान पान को ही धर्म समझ बैठे थे। चोरी करना, डाका-डालना, व्यभिचार करना, झूठ बोलना इतना घोर पाप नहीं समझा जाता था कि इसके लिये जाति से बाहर करने को ज़रूरत पड़े। परन्तु दूसरों का छुआ खाया नहीं और धर्म गया नहीं। इस अदूर-दर्शिता ने हिन्दू जाति को इतनी हानि पहुँचाई कि इनका धर्म कर्म ही नहीं किन्तु वाणिज व्यापार, कला कौशल सब नष्ट हो गये। विदेश यात्रा बन्द, दूसरी जातियों के साथ व्यवहार बन्द। हिन्दू जाति अपने ही देश में क़ैद होगई। जो जाति एक समय पत्थर से भी अधिक दृढ़ थी उसकी छुई मुई

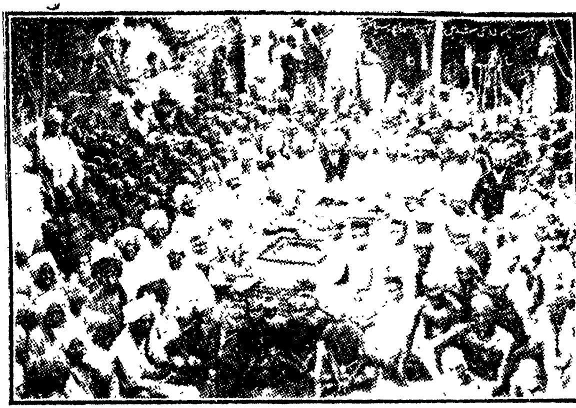
के पौधे के समान दशा हो गई। छूते ही मर जाना इसकी विशेषता रह गई।

ऋषि दयानन्द ने इस निर्बलता का भली प्रकार निरीक्षण किया, और इसका एक मात्र उपाय यह बतलाया कि वैदिक धर्म ग्रहण करने का अधिकार प्रत्येक मनुष्य को है। चाहे वह किसी जाति या देश का क्यों न हो। जो वैदिक धर्मग्रहण करे वही आर्य्य है, और उससे किसी को घृणा न करनी चाहिये। जो वैदिक धर्मी नहीं वह अनार्य है। उस पर दया करनी चाहिये और उसे वैदिक धर्म में आने के लिये प्रेरणा करनी चाहिये। स्वामी दयानन्द ने यह भी बतलाया कि संसार की समस्त जातियाँ पहले एक ही थीं। यह सब भारतवर्ष से चलकर संसार में फैली। इनमें रक्त की समानता है। यह भिन्न २ जातियाँ नहीं हैं। इसलिये इनको वैदिक धर्म से वंचित रखना पाप है।

ऋषि के उपदेशों ने आर्य्यसमाज को जगा दिया और श्री पं० लेखराम जी आर्य पथिक ने शुद्धि की प्रथा जारी की। इसके अनुकूल जो मुसलमान, ईसाई या अन्य मतावलम्बी वैदिक धर्म को प्रिय समझता उसको आर्यसमाज में प्रविष्ट होने का अधिकार दिया जाता। इस प्रकार प्रकार शनैः शनैः बहुत लोग आर्य हो गये और उनके साथ खानपान का व्यवहार होने लगा। कई मौलवी शुद्ध हुये। कई साधारण पुरुषों ने वैदिक धर्म ग्रहण किया। पक्षपाती मुसल्मानों ने

इसका विरोध किया और पं० लेखराम जी को एक मुसलमान ने १८९७ ई० में मार भी डाला। परन्तु आर्य लोग इस काम को निरन्तर करते रहे। हिन्दुओं ने भी आर्यों का विरोध किया। वह कहते थे कि यदि मुसलमान आर्य्य होंगे तो हमारी पवित्रता में बाधा पड़ेगी। हम भ्रष्ट हो जायंगे। यह उनकी सर्वथा भूल थी। क्योंकि आर्य होते ही मुसलमान गो रक्षक, वैदिक धर्म्म, गायत्री का जाप करने वाला बन जाता था। हिन्दू जाति की हानि उस व्यक्ति के मुसलमान रहने में थी न कि आर्य होने में। परन्तु अदूरदर्शी हिन्दू समझते ही न थे। इस प्रकार आर्य्यों को अपने हिन्दू भाइयों के हाथों अधिक कष्ट भोगने पड़े और शुद्धि के प्रचार में बाधायें भी हुईं।

परन्तु ईश्वर ने इनकी आंखें खोलदीं। मालावार में मुसलमान मोपलाओं ने अवसर पाकर वहां के हिन्दुओं को १९२२ ई० में सैंकड़ों की संख्या में या तो मार डाला या ज़बरदस्ती मुसलमान बना लिया। जो मुसलमान बनने से इनकार करता उसका तलवार से सिर उडादेते थे। कुएं के कुएं हिन्दुओं के धड़ों से भर गये। आर्य प्रादेशिक प्रतिनिधि सभा पंजाब ने म० खुशालचन्द जी और कुछ और आदमियों को वहां भेजा। कालीकट में आर्य्यसमाज ने सहायता की निधि स्थापित की। बहुत से अत्याचार पीड़ित हिन्दुओं को शुद्ध किया। यह देखकर हिन्दू नेताओं ने भी करवट बदली।



शुद्धि-मंडप



मलाबार के पीडित हिन्दू जो आर्य्यसमाज द्वारा शुद्ध किये गये।

"a ladylove exceeding fair with soft blue eyes and yellow hair." He wrote to his mother from Sydney and told her of his engagement. "Henrietta has been to school two years in Germany, speaks German, and is interested in German literature " Apparently these accomplishments would "put her right" in the eyes of a fond mother whose husband had once taught school.

But they decided not to marry until Huxley got established as a recognized scientist He left Henrietta in Sydney and returned home to his influential friends. They suggested that he "go down to the meeting of the British Association and make himself notorious somehow or other." In order to succeed, they told him, a man must do "a little trumpeting now and then " Tom was a sensitive fellow, but love had taken complete sovereignty over him. With a feigned assurance that concealed a trembling heart he delivered a lecture on oceanic hydrozoa (underwater animals) before an audience of scholars who had a habit of "waving and wagging one coat-tail when they applauded." There appeared a small notice of this lecture in the *Literary Gazette*.

And then fortune smiled upon him again He submitted for publication a paper he had written aboard the *Rattlesnake* on the anatomy of a species of jelly fish he had studied on his voyage. The paper was hailed as the basis for "a new branch of philosophic zoology." It was also the basis for Huxley's future success It brought him the Royal Medal and an election to the Royal Society. "And now," he wrote enthusiastically to Henrietta, "if only I had four hundred pounds a year!"

And Henrietta wrote back—"Let us be patient."

III

THEY WERE MARRIED after seven years of patient waiting. Huxley was now one of the most promising young scientists in England. He had passed the goal of four hundred pounds a year He was a contributor to the *Westminster Review*, a teacher at the Government School of Mines and a lecturer at the Royal

Institution. He faced his future prospects with "complete equanimity."

He especially enjoyed his teaching. The Government School of Mines had instituted free evening courses for workingmen. "Mass Education" had become the battle cry of the British intelligentsia. Everywhere in London the air was "pink with the new social philosophy" Huxley was an ideal teacher, a self-made man speaking in brisk unacademic language to self-made men "I am sick of the dilettante middle class. I am glad I am not at Oxford. Here in London the air is free of the dons and the undergraduates and the ancient rituals." Here were workers who lived among *facts* Huxley's explanations of the glacial epoch were masterpieces of melodrama His style was racy Thousands of people from every grade of society stormed the doors of the lecture hall. But only the laborers were admitted. All kinds of subterfuges were resorted to. One clerk attempted to gain admittance by asserting he was a "driver"—neglecting to add, however, that the only thing he "drove" was a quill.

It was at the School of Mines that Huxley at last found his vocation. He was to become a popularizer of science With the magic wand of his intellect he touched the dead bones of antiquity—and behold, the bones took on flesh and came back to life.

Huxley was not only a popularizer of scientific knowledge, but a crusader for scientific causes. Any unrecognized pioneers? Huxley saw to it that they won recognition Any challengers to a reasonable theory? Huxley was ready with a two-fisted intellect to enter the fight.

At this moment there was an unusually spirited fight raging around the new Darwinian theory of evolution. It offended the dignity of many people to acknowledge their descent from the lower animals At a meeting of the British Association (in 1860) the Bishop of Oxford had turned to Thomas Huxley with a sarcastic smile. "I beg to know, is it through your grandfather or your grandmother that you claim your descent from a monkey?"

The audience was aghast Tom Huxley's eyes glistened as he rose to his feet. He felt no need to be ashamed of having an ape for a grandfather, he asserted. "If there were an ancestor I might possibly feel shame in recalling it would be—a man like the Bishop of Oxford."

For twenty-five years the battle for evolution went on with unabated fury. And Huxley stayed always in the forefront of the fight. The newspapers headlined the issue, "Children of Adam, or Heirs of the Apes?" One of the contributors to *Punch* expressed himself on the subject in a little poem which a contemporary wag called *A Bit of Doggorilla*·

Am I satyr or man?
Pray tell me who can,
And settle my place in the scale
A man in ape's shape,
An anthropoid ape,
Or a monkey deprived of his tail?

All England was divided on "the controversy of evolution which threatened to become a revolution." Huxley delivered scores of lectures in favor of Darwin And these lectures kept constantly winning "new converts to irreligion." People who came to stone Huxley remained to applaud His appeal was simple and eloquent "Does my belief really brutalize and degrade mankind? Is the poet or the philosopher or the artist whose genius is the glory of his age degraded by the . . . certainty that he is the direct descendant of some naked and bestial savage whose intelligence was just sufficient to make him a little more cunning than the fox? . . . Or is he bound to howl and grovel on all fours because . . he was once an egg?"

He collected his arguments and published them in a volume—*Man's Place in Nature*—which served as a challenging supplement to Darwin's *Origin of Species* Darwin himself was a shy recluse who had no taste for public disputes. He had written a book on the abstruse physiological theory of the transmutation

of species—a scientific treatise for which he expected nothing more exciting than a dignified burial in the dust of a paleontological library along with the other honored and innocuous dead. He was struck with amazement and alarm at the furor he had created. And then along came a faithful bulldog of a friend to protect him against the rage of his adversaries He was relieved to find a man who not only understood him but who was ready to fight for him.

For Darwin himself was no fighter. He had never meant to set himself up as an iconoclast. He had been too deeply absorbed in the recreations of his insects to hear the rumblings of the thunder that he had set loose with his new ideas. And now that the storm had broken in all its fury he was content to pass on and to leave the field to those who had more heart for the fight.

IV

In all his quarrels Huxley had worthy associates. He belonged to the X Club—a coterie of "gentlemen assassins of other people's prejudices" They met once a month. On the day before the meeting the secretary sent to each member a simple reminder on a postcard—X, plus the date of the meeting Once every summer there was a week-end picnic to which the members were asked to invite their ladies. The postcard for this event read—"X's + Y'vs." Although the gatherings were strictly informal, "just a few friends who did not want to drift apart," they nevertheless resulted in a whole "galaxy" of distinctions Five of the members received the Royal Medal, three the Copley, one the Rumford Six were presidents of the British Association, and three, presidents of the Royal Society

It was at a meeting of the X Club that Huxley coined the word which defined his attitude toward religion. "In this club," one of the members had remarked, "most of us are atheists. We know there is no God" Whereupon Huxley retorted "As for myself, I am merely an agnostic. I don't know." He was a passive

non-believer rather than an active disbeliever—a dissenter but not a deserter from the tenets of the church. "I have been providentially saved from a life of sin," he once remarked whimsically, "by three unorthodox factors—Carlyle, Science, and Love. The philosophy of Carlyle has taught me that a deep sense of religion is quite compatible with the entire absence of theology. Science has given me the support of authority without dogma. Love has opened up to me a view of the sanctity of human nature."

He felt that he needed no other bulwarks against the vicissitudes of this world or of the next—"if, indeed, there *is* a next world." It mattered not at all to him that people called him a heretic, an infidel, and other hard names. He knew that in accordance with the British law the word of a sneak thief who swore on the Bible would be taken against his own word. But he stuck to his honest convictions. "Huxley's passion," said Herbert Spencer, "was not only for truth but for something which is considerably rarer—candor."

His religion was that of a candid skepticism—a constructive rather than a destructive doubt. His attitude toward life was that of the scientist-poet. Truth is wisdom plus beauty. "Teach a child what is wise—that is morality, teach a child what is wise and beautiful—*that* is religion."

V

"TEACH A CHILD what is wise and beautiful." This was the paramount object of Huxley's life. In 1870, thanks to the efforts of Huxley and of other like-minded pioneers, the British Parliament passed an act to offer free education to the children of needy parents. Huxley was elected a member of the new school board. With the pitiless scalpel of his logic he cut deep into the "intellectual snobbishness" of the British aristocracy. "What might not the poor and lowly among men achieve if given the opportunity to education? And what would happen to many others of the

'best' in society? . . . We have all known noble lords who would have been coachmen, or gamekeepers, or billiardmarkers, if they had not been kept afloat by our social corks" In order to preserve a democracy, he declared, you must have not a minority of noble births but a majority of nimble brains.

He dedicated his life to the training of this majority—with his books, his experiments, his lectures. Especially with his lectures. He reveled in his classroom contacts. Here he was at his best He struck the students speechless with his biting sarcasm. Once he picked up the notebook of an earnest but incompetent Irish student who had been assiduously diagramming a sheep's liver Huxley studied the drawing for a few moments. "It reminds me," he remarked wryly, "of the Cologne Cathedral in a fog." On another occasion, at the conclusion of a lecture at the blackboard, he asked the men if he had made himself perfectly clear One bold voice spoke out: "All, sir, but one part during which you stood between me and the blackboard" The professor frowned. "I did my best to make myself clear," he said. "But it seems I couldn't render myself transparent."

Throughout his life he was a whiplash to little minds. Yet the flourish of his wit was worse than its sting. For at bottom he was a gentle soul. And a sick body. He could thank a dyspeptic liver for his sarcastic tongue As he passed middle age he began to suffer acutely from the "blue devils" of depression and hypochondria.

He took frequent trips to the Mediterranean to fill his lungs with good sea air. But as often as he returned to his professional duties he found his attacks recurring His friend Hooker had suggested nicotine as an antidote to his gastric disturbances. As a result he became an incessant cigar smoker—but still his digestion remained unimproved

At fifty-nine he had all his teeth extracted. He feared that this was a grave forewarning. In his zoölogical studies he had noted that the decay of an animal's teeth was a frequent premonition of its death. In his sixtieth year he faded rapidly. He was forced

to give up his work on dissection since it entailed too great a demand on his ebbing strength. Once when he was younger he had remarked lightly, "At sixty all scientists should be strangled." He resigned his professorship and his inspectorship at the Department of Fisheries. And finally, with a heavy heart, he gave up the greatest of his honors—the presidency of the Royal Society. In a speech of touching simplicity he explained to the members that in view of all their kindness he could not consider holding the office "for a single moment after my reason and my conscience have pointed out my incapacity to discharge the serious duties of this office" And then, when he had finished the speech he turned to his friends and said in a low voice, "I have just announced my official death."

But he was not as yet ready to die A new attack had been launched against him and the old lion was ready once more for the fight. The Honorable Mr Gladstone had written in a weekly periodical a bristling denunciation against those who disapproved of the biblical account of the world's creation. The Duke of Argyll had followed up this article with a paper on the "Reign of Terror" instituted by the naturalists who were trying "to destroy the foundations of God."

Instantly Thomas Huxley was cured of all his ailments. A lusty fight was to him the very elixir of life He took up his pen with his old-time vigor. "The antagonism of science is not to religion, but to the heathen survivals and to the bad philosophy under which religion herself is well-nigh crushed." This had been his lifelong argument. Why this constant attack upon science as the enemy of religion? Science did not reject religion. It merely questioned "this or that philosophical speculation, this or that theological creed." Science had been too long neglected as the poor Cinderella in the respectable family of human culture. "She lights the fire, sweeps the house, and provides the dinner, and is rewarded by being told that she is a base creature, devoted to low and material interests." While her sisters, Philosophy and Theology, are engaged downstairs in a ceaseless quarrel with

each other, Science in her garret "has fairy visions beyond their ken" She sees the order which pervades the seeming disorder of the world She observes the great drama of evolution as it unfolds in its beauty and its terror And she tries to transform the terror into beauty It is true that the strong animals prevail over the weak in the jungle. But in the gardens of mankind the meanest flower may be trained to flourish as beautifully as the stateliest tree. "Society differs from nature in having a definite moral object" This doctrine had gradually become Huxley's innermost conviction "The course shaped by the ethical man—the member of society—necessarily runs counter to that which the non-ethical man—the primitive savage—tends to adopt." When properly understood, both evolution and religion point to the selfsame end—the refinement of brute force into human love.

When Huxley spoke such words as these, the lips of the satyr grew tender with the devotion of the prophet. Here was a philosopher who smote his fellows for their foolishness—out of his great respect for their inherent wisdom. How could they accuse him of wanting to destroy? How could they brand him with a flippant disregard for human faith? Was it impossible for them to conceive of a man who had tasted his share of grief and who at three-score years could still retain the courage to think? "I have graduated in all the faculties of human relationships; I have taken my share in all the deep joys and the deeper anxieties of life . . . I have felt the burden of young lives entrusted to my care . . . I have stood alone with my dead before the abyss of the eternal . . ." This had been his personal struggle for existence. And out of the painful process of gradual adaptation, out of his sanguine youth, his aggressive middle age, his mellow later years—out of all these aspirations and successes and sorrows had come the gradual evolution known as Thomas Huxley. From rash skepticism, to skeptical intelligence—to a final perceptive glimpse. "The thinking man alone can check the natural struggle of brute strength."

And so he entered once more into the arena of thought and

found the vigor of a renewed youth in his winter years. Forgotten was the weakness to which he had yielded in a moment of foolish fear. His energy had caught its second breath. He no longer shuddered at the prospect of physical exertion. On the contrary, he exulted in it. He took a trip to Switzerland (1888) and walked eighteen miles, including a climb of two thousand feet, in a single day. He scoffed at the absurdity of his ever having yielded to "a dilated heart." He made a solemn vow to prolong his labor and to postpone the inevitable end. "For at the end of life all one's work looks so uncommonly small!"

VI

He built himself a house at Beachy Head on the seaside. Like the old philosopher, Candide, he spent his declining years in the cultivation of his garden. And then came the greatest irony into the life of this master of irony. He was canonized into a "respectable institution."

The agnostic had been exalted into a saint. He received the honorary degree of Doctor of Laws from the citadel of British orthodoxy, the University of Cambridge. "I shall be glorious in a red gown!" he wrote sarcastically. He was appointed Dean of the College of Science. "The only ambition that remains to me," he laughed, "is the Archbishopric of Canterbury."

And finally he was knighted. He accepted this honor, like all the others, with his tongue in his cheek. "Ancestral nobility" was to him little more than a farce. "My zoological studies have carried me so far back to my remote ancestors that my immediate ancestors no longer interest me."

He never came to court, and he paid but an occasional visit to London. He had grown deaf in one ear and he therefore felt sensitive about accepting social invitations. He never could sit at table, he complained, without making an enemy of the neighbor on his deaf side.

And so he plodded his lonely but cheerful way through his de-

clining years "There goes Professor Huxley"—once remarked an old lady—"faded but still fascinating"

As he grew older he withdrew more and more from society into the solitude of his garden. When his youngest granddaughter paid him a visit, she looked at him with a puzzled expression in her eyes "You are the curiousest old man I ever saw!"

A curious man with his curious plants Here in his garden he inspected his creepers and tended his gentians and sheltered his exposed shrubs against the wind and collected his essays for final publication The story of progress. From the seed of the past through the growth of the present to the buds and stems of tomorrow

And what is this hope of tomorrow—this ultimate purpose of the evolutionary process, this gradual acquisition of knowledge through incessant struggling and suffering? Is not the end of all this struggle 'the survival of the mentally fittest and ethically best? .

VII

Huxley passed through a severe winter in his seventieth year. Yet he had never felt more cheerful. The doctors shook their heads, but he laughed at them. As the spring approached, he wrote to his friend Hooker and told him not to pay any attention to the alarming reports that were being published in the newspapers about his health "I don't feel at all like sending in my checks"

Three days later he was dead.

AGASSIZ

•

Great Scientific Contributions by Agassiz

Founded the Museum of Comparative Zoology at Harvard

BOOKS, TREATISES AND RESEARCHES

Species of Fishes (in the Amazon River).

History of the Fresh Water Fishes of Central Europe.

The Growth of Continents

Researches on Fossil Fishes.

Critical Studies on Fossil Molluscs

The Structure of Animal Life.

Zoological Nomenclature

The Glacial System

Geological Sketches.

Louis John Rudolph Agassiz

1807–1873



He was born at Motier, a Swiss village nestled on the shore of Lake Morat among the foothills of the Bernese Alps. He came of a Huguenot family which had escaped from France during the persecutions of Louis XIV.

His immediate ancestors on his father's side had been clergymen for six generations. On his mother's side, too, he came of an intellectual—and sturdy—stock. Nature had endowed him with a physical and mental heritage of unusual caliber. He was a man born for action and thought.

From early childhood he developed a passion for collecting fishes and birds and mice and rabbits. His brother Auguste was likewise animated by the collector's mania. The two boys started a home museum of "rare and interesting living things." At fourteen it was the modest aim of Louis, with the help of his brother, to memorize the Latin names "of every known animal and plant" Already he had drawn up a manifesto, which he read to an audience of his own fancy, about his future career as a great scientist

"I shall advance in the sciences. I shall receive my preliminary training at Neuchatel and matriculate at a university in

Germany. I shall finish my education at Paris. Then I shall begin to write." He was resolved to become an outstanding man of letters.

His parents, to be sure, had other ideas for Louis. They wanted him to join the business firm of his uncle at Neuchatel. But they committed a serious error. At fifteen they allowed him to enter upon a two years' course of study at the College of Lausanne. "Time enough for business later on," they said. They were wrong. From the moment he entered college, Louis Agassiz never changed his allegiance from learning to earning. He had decided upon the course of his life, and in this course he persevered to the end.

II

He had learned that his early ambition to classify all the different species of the plant and the animal kingdoms by merely giving them Latin labels was not enough. He must familiarize himself not only with their names but also and especially with their structures. Then he would be able to follow their classifications and, if necessary, to give them new classifications of his own. He felt that a firsthand observation of nature, even with his unpracticed eye, was worth far more than a stuffy perusal of all the learned Latin treatises on the subject. But if he was to "see for himself where the truth lay" he must wear the proper spectacles. A knowledge of anatomy was the indispensable tool of the naturalist. Accordingly he entered the Medical School at Zurich and came into contact with some of the leading anatomists of the day. He spent many of his waking hours in the dissecting of animals and at night he slept "in a menagerie" of forty birds. He read practically nothing outside of his "living" texts. "The life histories of the feathered songsters were his only novels. The accidental deaths of his pets were his sole tragedies."

Then, Heidelberg. He was nineteen when he appended his name to the students' list at that university. He took fencing les-

sons to develop the accuracy of his eyes, which were the vital organs of his research. He perfected himself in the Classical and the Romance languages, for a scientist must be at home in all tongues He rose early and spent every minute of the day purposefully. When the lectures were over he met in his rooms with a party of his fellow students each of whom specialized in some branch of natural history. At these meetings the young "scientific experts" delivered lectures to one another, compared notes and finally organized themselves into a "Little Academy"—a learned society in which "all our members *increase* their knowledge by *sharing* it."

Agassiz had come to believe strongly in this method of educational partnership "The interchange of notes—that is, the comparative system of education—has opened up to me the philosophical view of nature as one great world." At last he had definitely formulated the plan for his life's work. He would investigate the nature of the world as a comprehensive unit.

But just then the comprehensive unit of his plan received a severe shock. His parents had lost a business man. Now they wanted to find a doctor. They insisted upon his specializing in surgery—a field that would enable him to marry and to settle down to a comfortable living. "The sooner you have completed your medical course," wrote his mother, "the sooner you can pitch your tent, catch your blue butterfly, and transform her into a loving housewife."

There was a stormy controversy between Agassiz and his parents, but at last they reached a compromise. Agassiz might indulge himself in his fish collections provided he practiced surgery as a livelihood. "Let the sciences be the balloon in which you prepare to travel through higher regions, but let medicine and surgery be your parachutes."

Reluctantly the young naturalist began to prepare himself for a profession in which he had little interest when a circumstance arose to save him from his predicament. One of his professors, the eminent scientist Von Martius, invited Agassiz to collaborate

with him in a book on natural history which he was preparing for publication Louis was overwhelmed with excitement He wrote to his sister Cecile a letter in which he enthusiastically discussed his plans "Will it not seem strange when the largest and finest book in papa's library is one written by his son, Louis? Will it not be as good as to see my prescription at the apothecary's?"

Even his parents were pleased at the prospect They heard that the advance sheets of the manuscript had created a sensation among the leading scientists of the day. "Let him play with science for a while, if only he will stick to his medicine as his life's work"

They allowed him to pursue his naturalistic studies until he received the degree of Doctor of Philosophy Now his name could appear with an academic title on his forthcoming book. Agassiz felt certain of his destiny. Should the book prove a success—and he was confident that it would—his parents would ultimately consent to his adoption of science as his life's vocation After all, what his parents wanted for him was not necessarily a *medical* but a *successful* career.

With this thought in mind Agassiz set himself indefatigably to his scientific studies. Let other students while away their time in pleasure. He would follow his own course. He would be not merely a great naturalist but the greatest naturalist of his time. The desire to travel in the interests of his studies had come upon him strongly. When he learned that Alexander von Humboldt was looking for assistants to accompany him on an expedition to the Ural Mountains he addressed, with the impulsiveness of youth, a letter to M. Cuvier, the friend of Humboldt, to intercede in his behalf. "For six months I have frequented a blacksmith's and carpenter's shop, learning to handle hammer and axe. And I also practice arms, and exercise with the sabre and the bayonet. I am strong and robust, I know how to swim, and I do not fear forced marches . . . In a word, I seem to myself made to be a traveling naturalist. I need only to regulate the

impetuosity which carries me away. I beg you, then, to be my advocate with Herr von Humboldt."

But his petition came too late. Humboldt had already selected his assistants. And Louis Agassiz, to fulfill the promise he had given his parents, continued his medical studies. In spite of his distaste for the profession, he threw himself into these studies with the energy that was part of his natural temper And he accomplished prodigious results He wrote more than seventy-five theses on anatomy, surgery, obstetrics and pathology. In April, 1830, Madame Agassiz received the following note from her son "Dismiss all anxiety about me You see I am as good as my word" The young man who was already known throughout Europe for his book on natural science had, true to his promise, taken the degree of Doctor of Medicine.

III

HE WENT TO PARIS, the center of scientific learning, and presented himself before Cuvier. The great anatomist received him with open arms. He gave Agassiz a nook in his laboratory and freely bestowed upon him his instruction and advice The young man had come to Cuvier with a definite purpose. He had heard that the old Frenchman was preparing a book on fossil fishes—a subject which Agassiz himself had been diligently studying for some time. He hoped that when he showed his notes to Cuvier, the latter would commission him to do the entire work And Agassiz was not disappointed in his hope. Cuvier turned over to him his entire collection of fishes and told him to go ahead with the book. "I work regularly fifteen hours a day," wrote the young scientist to his parents. His small monthly allowance was insufficient to his needs For he was obliged to hire an artist for the sketching of his specimens. Often he went hungry long before the end of the month The publisher of a scientific journal, the *Bulletin*, offered him the editorship of the department of zoology—a position which would substantially have

increased his income But Agassiz declined the offer. For it would have taken two hours daily from his research. His father begged him to come home and to settle down to surgery His master Cuvier pleaded with him to relax from his research. "Hard work kills," he warned the young man. The old naturalist was only too well aware of the meaning of these words. Shortly after his warning to Agassiz he was himself stricken with paralysis on his way to the Chamber of Deputies Within a few days he was dead.

It was a tremendous blow to Agassiz, this loss of his great colleague and friend. Where now would he receive the encouragement to continue his research? His money was as "rare as some of his zoological specimens" He must dismiss his artist He must give up his science. And condemn himself to surgery for life. "If you follow surgery," wrote his mother, "you will perhaps reach the result of your work in the natural sciences a little later." Agassiz knew what that meant "A little later" was "never."

But again his good fortune came to the rescue in the guise of an old man. This time it was Cuvier's friend, Alexander von Humboldt, who acted the part of the Good Samaritan. Agassiz had called upon the illustrious scientist shortly after his arrival at Paris, and Humboldt had promised to write to the publisher, Cotta, regarding the manuscript which the young man was preparing For several weeks there was no word either from Humboldt or from the publisher—weeks of hunger, privation, despair. And then at last Agassiz received a response—a letter that was quite different from anything he had expected. It contained a check for a thousand francs! The old scientist had learned of the young scientist's plight. "You will surely pardon my friendly good will toward you, my dear M. Agassiz, if I entreat you to make use of the accompanying small credit," he wrote in words of exquisite tact. "You would do more for me, I am sure."

This was but an initial step in Humboldt's sponsorship of Agassiz He used his influence to obtain for the junior naturalist

a professorship at the Swiss university of Neuchatel. And so Agassiz returned home—and not as a surgeon. His parents were now completely won over to the thought that their son could make a good living even as a scientist

IV

HIS SUCCESS as a natural historian was assured Installed as a teacher at the university, he had become an immediate favorite both with the faculty and with the students He had gained the patronage of Humboldt, and through him the admiration of the king of Prussia At twenty-five he had transformed Neuchatel by the magic of his personality and his talent into a great center of science. His colleagues throughout Europe were impressed by the intense energy of his researches "When I am at Neuchatel and knock at the door of Agassiz," jestingly remarked the geologist, Leopold von Buch, "I am always afraid lest he will take me for a new species"

Agassiz did not confine his energy to his teaching and his studies He was a great lover of children, and the children shared his great love for nature. He enjoyed firing their imagination as he strolled with them through the hills and the fields and talked to them of the works of God. Never did he believe in a textbook illustration of the beauty of nature. His was a living science, waiting to be unfolded to the eyes of all. He taught his little colleagues the elements of geography by climbing with them a mountain and pointing out the vast panorama below. He initiated them into the mysteries of botany while they gathered the flowers of the field. When he gave them a lesson on the tropical fruits he presented them with oranges and bananas and invited them to eat these fruits while he explained their structure. The children looked upon him not as their instructor but as their playmate. He was as full of gaiety as the most frolicsome of his little pupils.

He had introduced a new method of education. He had re-

nounced the stuffy classroom and returned to the gardens of the old Greek philosophers. And like the old Greek philosophers he was not only an assiduous teacher but a persevering student as well. Every moment that he could spare from his pupils he devoted to his own researches. For a time indeed it seemed that he had overexerted himself to his serious injury. The doctors feared that he was becoming permanently blind. But even that affliction did not deter him from his work. For hours he sat in a darkened room and practiced handling his fossil specimens until he acquired so delicate a sense of touch that he no longer feared his impending blindness. "Come what may, I shall be able to go on with my research."

But the fates, having tested him, gave him back his sight. And then he plunged more enthusiastically than ever into his work His fame spread all over continental Europe and beyond. The leading naturalists of England invited him to examine their collections of fossil specimens. As a result of his original research in *ichthyology* (the science of fishes), Sir Charles Lyell informed him that he had won the Wollaston prize—a sizable sum of money which he did not hesitate to accept since he had spent "his last penny" on this research He made a trip to England and received a cordial welcome. He had become the toast of the scientific world.

Yet there were some who remained skeptical about his genius. These skeptics maintained that there was more froth than substance to his scientific claims. And they decided to put him to the test A fossil fish had just been discovered in a stratum so low and indicative of so remote an epoch that it had thus far yielded no other specimens of organic remains Agassiz, who had not as yet heard of the discovery of the fish, was invited to a gathering of the skeptics and confronted with a question designed to lead him into a trap. If given a certain low geologic stratum, he was asked, could he venture to describe the type of fish that might be found there? For a moment the Swiss naturalist was silent Then he went to the blackboard and after a few

prefatory remarks in which he discussed the laws and the order of creation he sketched the outlines of the "hypothetical" fish that might be found in such a given stratum. When the fossil that had actually been discovered was now brought forward and compared with the sketch, the audience burst into a thunder of applause. For the conception of Agassiz was absolutely correct. "This man," exclaimed one of the amazed spectators, "has unearthed the very plans of God as if by a miracle!"

There was nothing of the miraculous, however, in the scientific method of Agassiz. He had merely learned to read the world as intelligently as some of the other scientists had learned to read their books To his mental as well as to his physical eye the world presented an organic structure It told a logical story, and anyone could learn to understand its related parts. Even as a young student he had learned that the study of the bodily structure of animals must be related to the study of the bodily structure of the earth. "Geology is but an extension of zoology."

It was not surprising, therefore, that Agassiz turned from fossils to glaciers He wandered over the valley of the Rhone and he climbed the boulders of the Juras. He lived in a cabin pitched upon a glacier that was churned again and again by a tempest of pulverized ice. Together with his party he struggled over vast terraces, sinking into the snow, tiptoeing over thin layers of ice, spanning crevasses that looked bottomless, scaling cliffs and clinging to life by a slender rope And thus gradually "all the physical laws of the glaciers were brought to light."

At one point Agassiz had determined to descend into the heart of the glacier—a feat which had been accomplished by no man before him. His companions protested vigorously against the dangerous project, but in the end they were compelled to give in to his obstinacy. They lowered him into a glacial well in a mass that was moving at the rate of forty feet a day. It was an even chance that Agassiz might remain buried forever in this frozen grave. Out of sight he sank seated upon a board. The deeper he descended the more intense the gloom. He was fasci-

nated by the blue bands of ice that ran around the walls of the pit—a greenish blue at the top and a midnight blue below. When he reached a depth of eighty feet he found a wall of ice that divided the passage into two tunnels. He selected one of the tunnels and continued his descent to a depth of one hundred and twenty feet. Suddenly he found himself plunged into cold water He signaled to be hoisted immediately, but his companions misunderstood the signal They continued lowering him—to certain death, as he thought. Once more he shouted and this time he was understood. As he began his ascent he saw huge icicles that pointed at him from above and threatened at every moment to transfix him. It was a tremulous and breathless philosopher that finally came to the surface amidst the cheers of his friends.

But this narrow escape did not deter him from further adventures in the interests of science. From the Alps he went on to study the glacial formations of the Scottish highlands. And finally he published an account of his geologic investigations. He advanced the theory—regarded as revolutionary in the scientific circles of the day—that Europe at one stage had been completely covered by a solid sheet of ice "Siberian winter established itself for a time over a world previously filled with a rich vegetation . . . Death enveloped all nature in a shroud . . . Springs paused; rivers ceased to flow; the rays of the sun, rising upon this frozen shore . . . were met only by the breath of the winter from the north and by the thunders of the crevasses as they opened across the surface of this mighty ocean of ice"

His book on the glacial period, *Le Système Glaciaire,* proved to be as monumental a contribution in the field of geology as his works on fossil fishes had been in the field of ichthyology. And his reputation increased proportionately—not only among the savants, but among the common people as well On one of his trips with a party of friends he stopped on the road for refreshment An elderly traveler overheard the name "Agassiz' and came over to the youngish-looking individual who had been addressed by that name.

"Pardon me, but are you the son of the celebrated Professor Agassiz of Neuchatel?"

Agassiz smiled, and one of his companions remarked, "You are standing before Professor Agassiz himself"

The stranger turned away with an apology, and one of the bystanders heard him whisper to himself: "Such a modest young body for such a wise old head!"

The admiration for this "wise old head" was nowhere greater than in America. The trustees of the Lowell Institute invited him to deliver a course of lectures in Boston Agassiz was only too happy to accept the invitation. The idea of a trip to the new continent in the interest of science had long been one of his "unattainable" dreams. And here was his dream unexpectedly come true!

When the popular young professor left for America the little university town of Neuchatel was plunged in gloom To be sure, Agassiz had promised that he would return, but there were many who feared that he might succumb to the fascinations of the New World.

Yet they all rejoiced in his good luck, and they wished him a hearty *bon voyage* The Prussian king presented him with a gift of fifteen thousand francs. And the king of all the scientists sent him a godspeed message written in a hand that trembled with age. "Be happy in your new undertaking, and preserve for me the first place in your heart When you return I shall be here no more, but the king and the queen will receive you on this 'historic hill' of Sans Souci with the affection which, for so many reasons, you merit . . Your illegible but much attached friend—Alexander von Humboldt."

V

Agassiz was thirty-nine years old when he arrived in Boston (October, 1846). He fell an immediate and willing captive to the charm of American democracy. "A characteristic feature of

American life," he wrote to a friend in Europe, "is to be found in the frequent public meetings where addresses are delivered. Shortly after my arrival in Boston I was present at a meeting of some three thousand workmen, foremen of workshops, clerks and the like. No meeting could have been more respectable or better conducted. All were neatly dressed, even the simplest laborer had a clean shirt It was a strange sight to see such an assemblage, brought together for the purpose of forming a library, and listening attentively in perfect quiet for two hours to an address on the advantages of education"

He was a European who spoke broken English. Yet in the language of the heart he already felt himself a native of the great republic. He was perfectly at home among the American people. "What a people! . . . In the Old World a man of exceptional gifts is content to devote himself to a lifetime of cloistered study while at his side thousands of his fellow men vegetate in degradation . . . Here in the New World everybody lives well, is decently clad, learns something, is awake and interested . . . Instruction does not—as in some parts of Germany, for instance—furnish a man with an intellectual tool and then deny him the free use of it. In America all men are allowed to employ their talents for the common good . . ."

But if he found among the general masses an eagerness for learning he found also among the intellectuals a high standard of scholarship. At Harvard College, whose faculty he joined within a year after his arrival in Boston, he met a group of teachers whose brilliancy could hardly be matched anywhere in Europe Among his intimate colleagues at this University-on-the-Charles were such men as Longfellow, Felton, Pierce, Wyman and Asa Gray His wider circle of friends included Channing and Emerson, Ticknor, Motley, Whittier and Lowell. Small wonder, then, that Agassiz felt little inclination to go home.

And now the final tie that linked him with his former home was broken. His wife died He sent for his children, married an

American woman and settled down to the business of transforming his adopted country into the scientific center of the world.

But his old country did not give him up without a struggle. The trustees of the University of Zurich appealed to him as "a good European" to return home And they held out a remunerative professorship as a bait The Emperor Napoleon "commanded" him as a French citizen to come back to Paris and to accept a position at the *Jardin des Plantes*. To the Zurich request he replied gently that his obligation to his new country was of more moment to his conscience than his affiliation with the old, to the emperor's demand he replied more sternly that he was not a French citizen, although his ancestry was of French origin. "For centuries my family has been Swiss, and in spite of my ten years' exile I am still Swiss" Swiss by birth, but American by affection. America was to become the home of his most ardent dream—a museum of natural history.

When he had first arrived in Cambridge he had stored his precious collections in an old building on the college grounds For a short time he had left Harvard to accept a professorship at the Charleston Medical School and a fear for the safety of his specimens had haunted him throughout his absence. When he returned to Harvard he was determined to find an adequate shelter for them in a permanent museum.

But his plans for a museum had now grown far beyond the exigencies of his personal interests. This treasure house of the ages was to become the embodiment of his life's philosophy. Here the student would find his laboratory and here too the layman would see spread out before him an exhibition of specimens so arranged that each individual part of nature would at once show its intimate relationship to the whole—"an epitome, as it were, of the Creation" So ran his dream. Ardently he discussed it with his friends, with the light of prophecy in his eye and a prophetic enthusiasm on his lips

And then one of his friends died and left him fifty thousand dollars for the establishment of the museum. Agassiz accepted

this bequest, but only on one condition—that the proposed institute be known not as the *Agassiz Museum* but merely as the *Museum of Comparative Zoology at Harvard*. It now remained for the Massachusetts legislature to vote a grant of land. Some of the assemblymen were rather skeptical about the construction of a "palace for bugs." But they voted the grant.

The museum was erected as a "gateway to the world of science" and as an embodiment of the doctrines of the Swiss professor. Here he was master over the vast universe of the mind as he led his students, step by step, down the illuminated aisles of the centuries With the fervor of a poet he taught the tenets of his scientific creed—"I believe."

VI

AGASSIZ RENOUNCED the Darwinian conception of evolution which affirmed that the development of living organisms came about wholly through *natural selection from accidental variations*. He could not, like Darwin, conclude that "the development from the lower to the higher, from the simple to the complex" was merely a mechanical and material process On the contrary, he believed that this development was the result of the highest ethical forces forever at work in the universe. The Darwinians had banished all purpose in the life of the individual. The only law they recognized was the organic law of physical force. This, maintained Agassiz, is the hopeless conception of a godless world "Evolution," he said, "takes place not according to organic forces within but according to an intelligent plan without"

This challenge to the Darwinian theory of evolution was fundamental. Once the doctrine of divine creation is superseded by the dogma of natural selection, man has been robbed of his spirit and reduced to an automaton with mechanical wheels for a soul Agassiz intuitively foresaw the destructive consequences of the Darwinian theory if carried to its inexorable conclusion

The too literal interpretation—or rather misinterpretation—of this theory was destined to give rise to the Superman of Friedrich Nietzsche and to the exaltation of physical force as the only basis for conduct among men.

Many of Agassiz' pupils, for want of scientific evidence, rejected their teacher's doctrine of a divine guidance. But Agassiz was a teacher not only of science but of ethics. His observations tended to convince him that the Darwinian theory of the transmutation of the species was incorrect. There was a distinct difference, he felt, between the *generation* of a species and the *creation* of a species. The Darwinian biologists had never stepped beyond the physical laws of generation to the causes for creation. "Animals can generate—that is, reproduce—their kind; God alone can create a new kind." This he firmly believed. "The idea of the procreation of a new species by a preceding species is a gratuitous supposition opposed to all sound physiological notions" He found it impossible to believe that the "biological phenomena, which have been and still are going on upon the surface of our globe, are due to the simple action of physical forces I believe they are due, in their entirety, as well as individually, to the direct intervention of a creative power, acting freely and in an autonomic way . . . I am certain that there is not only a material connection but also and especially an intellectual coherence in things. . . . This intentional plan I have tried to make evident in the organization of the animal kingdom . . ." This was the dream of his museum, the sole purpose of his teaching—to give back to man his lost understanding of God.

Formally Agassiz had the mind of a metaphysician. Actually he was a hard-headed pragmatist in his method of instruction. When he was asked to cite what he regarded as his greatest achievement he replied, "Observation. I have taught men to observe." To the uninitiated pupil who first came to his classes his teaching was difficult. He would place before his pupil the skeleton of an old loon or the body of a smelly fish and tell him

to note down his observations about the specimen. Then he would leave him to his task without a word of advice or a question or a comment. When he returned he would merely ask with a friendly smile, "Well, what have you seen?" When the pupil finished describing his observations, Agassiz would reply, "That is not enough. Go back to your specimen and look some more."

Look, look, look—was his constant injunction To look was to know. From all those who wanted to study nature under his supervision he exacted the same toil that he had imposed upon himself. But this toil had at last begun to tell on him. The splendid constitution that had enabled him to sleep night after night on a glacier with only a blanket under him, to stumble up the peaks of mountains and to descend into the depths of icy caverns—all in the interests of science—was now beginning to fail him His old master, Cuvier, had uttered prophetic words when he had said that "work kills." His friends urged him to take a vacation. And the devotee of learning took their advice in characteristic fashion. He left the museum at Cambridge for the tropics of Brazil. He exchanged his teaching engagement for a trip of exploration to collect specimens of the fresh-water fishes in the South American rivers. Never did he work more strenuously than during this "vacation" He delivered lectures on the steamer that took him to South America. When he arrived there he worked from early morning till late at night gathering and arranging his specimens And when he returned to the United States he delivered a course of lectures at Cooper Union, in New York City, on the results of his trip.

And then he went back to add his new specimens to the collections of his beloved museum. Here was another group of links binding more closely together the chain of evidence that the order of nature was not mechanical but purposeful, not the accident of a blind force but the design of a Supreme Intellect. For Agassiz regarded his scientific vocation as a priesthood. His museum was his cathedral, and it was here that the modern scientist carried on the work of the ancient prophets. "It is the

business of the prophets and the scientists alike to declare the glory of God."

VII

AT LAST the prophet-scientist had worn himself out completely with his labors. He suffered a paralytic stroke. The doctors prescribed "a long rest" in the country. They never expected him to recover. But again the fighter who all his life had struggled against odds came out victorious in the unequal battle Within a few months he was back at Cambridge. He appeared to be in perfect health again. He received and accepted an offer to make a scientific cruise to the Pacific. When he reached Santiago he learned that the French had elected him foreign associate of the Institute. "The distinction pleased me the more because it was so unexpected," he wrote to a friend. And then he added with a touch of whimsical sadness, "Unhappily . . . it is to a house in ruins that the diploma is addressed."

Yet in spite of the premonition of his approaching end, his active mind was still preoccupied with great projects. He had long been planning a summer school where teachers of nature might undertake scientific investigations under his guidance. But he had no capital for such an undertaking. "In the course of my life," he had once remarked, "I have found time for everything except for making money" Fortunately a wealthy admirer in New York, Mr John Anderson, presented him with a tract of land on Buzzard's Bay together with a substantial sum of money for the proposed summer school. On July 4, 1873, Agassiz set sail for Buzzard's Bay with all the enthusiasm of youth The spirit in the man refused to die.

When he arrived on the island he found that the work on the buildings was as yet far from completed, although the students chosen for the class were expected to arrive in a few days Undaunted, Agassiz called the carpenters together. "There is no personal gain involved in this school There is no money to

be made. Its one purpose is to promote education. We are confronted with an emergency. Tomorrow is Sunday. It is up to you to decide whether you work or rest"

"We work!"

When the boat from New Bedford arrived with its cargo of young men and women the dormitories were ready to receive them The barn had been transformed into a reception hall; the platform was covered with flowers, and the walls were brightly festooned with silk draperies. On the wharf as the students disembarked stood the old Professor alone. His great face beamed with pleasure, his white hair glistened in the sun. He gathered his students around him and paused in silent prayer.

Agassiz returned to Cambridge in the fall. The sands of his allotted time had nearly run out He prepared to write for the *Atlantic Monthly* a series of articles defending his theories on evolution. But he could hardly steady himself for the effort. He hadn't the strength to face the coming winter It was getting dark and late "I want to rest," he said. "I am tired; I am ready to go."

At times as he trudged to and from the museum he felt a strange drowsiness He was sleep-walking in a world he no longer recognized But whenever he opened his eyes and saw again the life around him, his heart sang a silent psalm to the Creative God whom he knew and adored.

Then late one day in December he put away his specimens for the last time. And men grieved for the family and the friends he left behind him But no one grieved for Louis Agassiz. "There was little of him that could die."

MENDEL

Great Scientific Contribution by Mendel

Discovered and formulated the Mendelian Laws of Heredity.	TREATISE *Plant Hybridization.*

Gregor Johann Mendel

1822–1884



IN THE SPRING OF 1850 Gregor Johann Mendel presented himself for examination as a high school teacher at Altbrünn. He had already taught for some time as a substitute teacher, but he was anxious to secure a permanent appointment. "The respectful undersigned," he wrote in his application, "would deem himself happy if he should be able to satisfy the highly respected examiners, and thus to fulfil his desire."

But Mendel was not able to satisfy "the highly respected examiners." They "ploughed" him in natural science. "The candidate," wrote the examiners, "has not mastered this subject sufficiently to qualify him as a teacher in the higher schools."

Disappointed in his first attempt, Mendel went back to his textbooks and several months later presented himself for a second examination. Again the examiners "flunked" him. "This (second) examination paper would hardly allow us to regard the candidate as competent to become an instructor even in the lower schools."

Such was the verdict of the contemporary "experts" on the scientific ability of one of history's outstanding scientists.

II

MENDEL'S FAILURE in his examinations was due to his originality He wrote above the heads of his examiners. "This candidate," they complained, "pays no attention to technical terminology. He uses his own words and expresses his own ideas instead of relying upon traditional knowledge."

But Mendel continued to use his own words and to express his own ideas. For he came of a stubborn and tenacious stock. For generations the Mendels had stuck to their guns and insisted upon their rights. On more than one occasion they had defied the authorities who had tried to impose their arbitrary will upon them. It was in the Mendel blood to select a course of action, or to enter upon a train of thought, and to pursue it to the end in spite of all opposition or failure.

And the course of action that Gregor had selected was to discover and to demonstrate some of the hidden secrets of nature. To discover these secrets not out of the textbooks but out of the heart of nature herself.

Mendel's love for nature, like his tenacity of purpose, came to him from several generations of peasants and gardeners. Born in the Moravian village of Heinzendorf, "the flower of the Danube," he was brought up with a passion for growing things. His father, a peasant by profession, was a horticulturist by inclination. Mendel spent many an hour of his childhood tending the plants in his father's garden.

Tending the plants, and observing them. He developed an early love for study "Just what is it that gives the colors and the shapes to the different trees and fruits and flowers?" Fortunately he was able to learn something about these secrets in his elementary schooling For the Countess of Waldburg, the lady of the Heinzendorf manor, had insisted upon the introduction of the study of nature as part of the curriculum in the schools of the district. The school inspector, Pater Friedl, referred

to this scientific study of nature in the elementary schools as a "scandal." But, luckily for Mendel's future development as a natural scientist, the Countess of Waldburg refused to eliminate this "scandal" from the Heinzendorf schools.

Following his elementary training at Heinzendorf, Mendel entered the high school at the neighboring town of Troppau. He worked his way through the six classes of the high school on "half rations." For his parents were unable to finance him to three square meals a day As a result of his privations, he fell seriously ill (in 1839) and was compelled to interrupt his studies for several months.

His poverty and his illness threatened to put an end to his studies altogether, when a piece of good luck came to him in the shape of ill luck to his father. One winter day, as his father was chopping down a tree, the trunk fell upon his chest and partially crushed it. Unable to go on with his work on the farm, he sold it to the husband of his eldest daughter, Veronika, and gave a substantial part of the proceeds to his other two children, Johann and Theresia The sum given to Theresia was meant as her dowry, but the young girl generously turned every penny of it over to Johann. Encouraged by this gift, Johann took up the study of philosophy at the Olmutz Institute and after four years of hard study, occasional illness and perpetual hunger he was ready to enter upon his life's career

But here was a perplexing question. Just what was Mendel's career to be? "It is incumbent upon me," he wrote, "to enter a profession in which I may be spared perpetual anxiety about a means of livelihood." He went to one of his teachers, Professor Michael Franz, and asked his advice about this matter. Professor Franz recommended a monastic life as best suited to meet his pupil's requirements And so, on October 9, 1843, Mendel entered the Augustinian monastery at Altbrunn, assumed the name of Gregor, and settled down to a life of prayerful devotion and practical toil.

III

SHORTLY before Mendel's arrival at Altbrünn a botanical garden had been planted on the monastery grounds under the supervision of one of the monks, Father Aurelius Thaler, a botanist noted for his profound learning, spiritual fervor and capacious thirst. Father Thaler was in the habit of following up a hard day in the garden with a merry evening at the tavern Displeased with this friar's excessive love for the winecup the abbot of the monastery, Father Cyril Napp, decided one night to teach him a lesson Decking himself out with all the insignia of his office, he sat down to wait for the erring member of his fold in the porter's lodge. It was not until late in the night when the wayward friar knocked for admission. His imagination, like his tongue, had been highly stimulated by "the cup that gladdens the heart." At the sight of his chief all dressed in his "heavenly regalia" he was for a moment flabbergasted. But he quickly pulled himself together With a deep and reverential bow he addressed himself to the abbot. "Lord, I am not worthy to come under thy roof." Then he turned on his heel—and went back to the tavern.

This merry "godson of Friar Tuck" died just before Mendel came to the monastery. But he left behind him not only the memory of a pleasant personality but also the legacy of a well stocked and scientifically tended garden. This garden was to Mendel like a gift from above. Here he spent all his spare moments, "watching and nursing the plants from their infancy to their old age." And in this botanical interest Mendel was not alone. Several of his fellow monks, sons of peasants like himself, shared his love for scientific gardening. It was a congenial group in which he now found himself—congenial not only temperamentally but intellectually as well. In their evenings they discussed theology, literature, philosophy, science, and occasionally even politics. For those were the revolutionary days of the eight-

een-forties. Men were opening their minds to new thoughts and their hearts to new visions. Even in the sheltered retreats of the monasteries these new thoughts and new visions had begun to take root. Some of Mendel's associates left the monastery for the larger world, since they preferred to fight rather than to pray for their fellow men.

As for Mendel, the revolutionary current swept him along for a while and then left him behind He was a student rather than a fighter. In spite of his peasant tenacity—a tenacity which we shall see most vigorously displayed in his later years—he was too sensitive a soul for the blows and the bloodlettings of the everyday world He couldn't bear to see suffering. He tried for a time to serve as a parish priest, but his superiors found him unfitted for this work, "the reason being that he is seized by an unconquerable anguish when he is obliged to visit the bed of a sick or a dying person . . . Indeed, this infirmity of his has made him dangerously ill, and that is why we have found it necessary to relieve him from service as a parish priest"

And so Mendel returned to his monastery and his garden. But he was dissatisfied with the passive life of the monastic order. His temperament was too energetic for mere contemplation. It craved for action as well. Mendel's was not only the receptive but also the instructive type of mind. He wanted to teach as well as to study. He applied for a position as substitute teacher in the local high school and got the job at a substitute's salary—that is, 60 per cent of the amount paid to the regular teachers.

His work at the school was satisfactory, his demeanor kindly, and his conduct "reputable—except for the fact that he has on six occasions been to the theater." However, the school authorities were inclined to wink at this "aberration" on his part After all, they admitted, "he has never gone to the theater alone, but always in the society of one of his colleagues" In spite of his "fondness for mummery," they concluded, "he is competent enough to serve as a substitute teacher."

As a substitute, but not as a permanent teacher. For the examiners, as we have already seen, had decided that he was too ignorant a scholar to be entrusted professionally with the instruction of the young He remained an "amateur" teacher to the end of his days.

IV

MENDEL'S TEACHING did not interfere with his monastic duties at Altbrunn. He continued to live at the cloister and to cultivate the plants in its garden He was a jovial, short and stocky little fellow, with a high forehead, a wide and generous mouth, a healthy appetite and a hearty laugh. His gray-blue eyes looked out through their glasses with a perpetual twinkle of cordial good will. He was a contented spirit in a beautiful world Yet there were times when his contentment gave way to indignation. The world was beautiful, but man was doing his best to make it ugly. The dreams of the creators were all too frequently crushed by the ambitions of the destroyers. The Prussians had invaded Austria (1866) and their yoke lay heavy upon the inhabitants of the conquered land. "The Prussians entered Brünn on July 12," wrote Mendel to his brother-in-law, Leopold Schindler, "and their billeting was extremely oppressive . . Horses, cows, sheep and fowls were carried off in great numbers, so were fodder and grain—with the result that even well-to-do landowners have been reduced almost to beggary . . The (invading) soldiers occupy the beds, while the regular inhabitants are compelled to lie on the floor or to sleep in the stable."

But the evil of the Prussian invasion passed, and Mendel was able to go on undisturbed with his work. He had become interested in the cross fertilization of the common pea. "Out of the simplest things shall ye know the truth" Mendel hoped, through his study of the heredity of plants, to learn something about the secret of the heredity of man. "How can we explain the manifold

shapes and colors of living things?" In order to find a possible answer to this question, he asked for a little plot of land in the monastery garden and proceeded to transform this plot into a living textbook. He selected twenty-two varieties of the edible pea—varieties differing in shape, size and color—and for seven years he mated, remated and transmated them and carefully noted the characteristics of their "children"

And this, in brief, is the summary of the characteristics he discovered in the successive generations of the "children of the garden".

1. When two different types of plants (or of animals) are mated, all the offspring of the next generation will be alike. This he called *the law of uniformity*

For example, if you cross a red flower with a white flower, all the offspring will be gray.

2. When the uniform offspring of the different plants are mated, the resulting offspring will *not* be uniform, but will segregate themselves into different forms according to a definite numerical ratio This he called *the law of segregation.*

For example, if you cross the gray flowers that have sprung from the crossing of the red flower and the white flower, you will get the following results:

Out of every eight offspring, two will be red, two will be white, and four will be gray. The crossing of the red flowers of this generation will always produce *red flowers.* The crossing of the white flowers of this generation will always produce *white flowers* But the crossing of the gray flowers of this generation like the crossing of the previous generation of gray flowers, will out of every eight offspring produce *two red flowers, two white flowers, and four gray flowers.* And all these flowers in turn will act in accordance with the Mendelian law of segregation. The reds will produce only reds, the whites will produce only whites, and the grays will produce reds and whites and grays in the proportion of two reds to two whites to four grays This law of proportional segregation will hold true of every successive gen-

eration of the "inter-marriage" of plants or of animals or of human beings.

The above is a somewhat loose and simplified explanation of the Mendelian laws of heredity. The crossing of two different breeds does not always produce an intermediate breed. If, for example, you mate a black dog with a tawny dog, you will most likely get a litter not of brown dogs but of black dogs. But all the dogs in this first litter will be *uniformly* black, and all the dogs in the interbreeding of this litter will be *segregated* into black, tawny and brown in the ratio of two to two to four. Thus the Mendelian laws of absolute uniformity as a result of the breeding of two different types, and of proportional segregation as a result of the interbreeding of hybrid (or mixed breed) types, will still hold true.

V

SUCH was the mathematical design of nature that Mendel discovered in the laws of the physical inheritance of living and growing things. It took him seven years of patient research to make this discovery. And it took the world thirty years to realize that a great new discovery had been made. When he first read his paper on *Plant Hybridization* before the Altbrunn Society for the Study of Natural Science, his audience listened politely, applauded faintly and promptly forgot the whole thing He published the paper, and it lay neglected on the dusty shelves of a few libraries. Disheartened at this universal apathy toward his scientific efforts, he went back to his monastic duties and his teaching In the cloister and the classroom at least he received a measure of recognition for his labors. Indeed he was rather popular with his fellow friars and his pupils

Especially with his pupils. They liked their rotund and jolly little teacher—his figure had filled out substantially as a result of the plentiful rich food at the monastery—and they came eagerly to his classes, not so much to imbibe his knowledge as

to chuckle over his anecdotes. He told them about the funny antics of his "children"—the plants and the insects and the animals which he kept in his garden and his cloister for his experiments. He related to them how one night, when he was asleep, his pet hedgehog had crept into one of his top boots. "Imagine my surprise in the morning when I tried to put on my boot and my big toe stepped upon a thousand needles!" He frequently invited his pupils into the monastery where he acquainted them at first hand with the habits of his bees and his birds and his mice. Whenever the circus came to town, he took his entire class along with him to have a little "chat" with the animals One of these "chats" came near to proving rather serious to Mendel. In his effort to attract the attention of the monkeys in one of the cages, he got too close to the bars. Whereupon the largest of the monkeys snatched off his spectacles. It was only with difficulty, and at the expense of a number of painful scratches, that Mendel succeeded in persuading the animal to give up his glasses. In spite of his pain, he had a good laugh together with his pupils over his comical "wrestling" match with the monkey.

His pupils admired this good-natured sort of humor that could laugh at its own discomfiture But most of all they admired his gentleness His impartial smile served alike to compliment the brilliant and to encourage the stupid among his pupils Remembering his own grief at his failure to pass his examinations, he rarely allowed any of his pupils to suffer a setback. Toward the end of the term he asked whether any of them wanted better marks. Then he would allow them to question one another. Naturally each of them would be as lenient as possible toward his neighbor in the hope of an equal lenience in return. To those of his pupils who still fell behind after this friendly cross questioning he extended an invitation to come to the monastery garden for special tuition without pay.

Finally, however, he was obliged to give up his teaching. For he received a new honor which required new duties. He was elected abbot of the monastery at Altbrünn.

VI

ONE OF MENDEL'S FIRST ACTS as the new prelate of Altbrünn was to return the kindness of his sister, Theresia, who had given up her dowry in order that he might go on with his education. He now repaid her with the education of her three sons, assuming the entire expense of their high school and college training. And even to strangers he was lavish with his purse. His gifts for the most part were anonymous. "There is no sense in humiliating the beneficiary by advertising yourself as his benefactor." Though he enjoyed a substantial salary as head of the cloister, he proved to his own satisfaction the adage that "it is more blessed to give than to receive."

Prelate Mendel loved to give and he loved to live. He always entertained his friends—out of his own pocket—at the monastery. On festival occasions, such as the Corpus Christi day and the day of St Thomas, he kept open house and larder to the entire village. As for his Christmas celebrations, they were like "a succession of enchantments out of the Arabian Nights."

And yet he lived to taste the bitter fruits of unpopularity. For he entered upon a course of action which, though it seemed to him justified, was nevertheless stubborn and in the opinion of many of his acquaintances ill advised. The Reichsrat had passed a bill (1874) for the taxation of church property "in order to supply the financial needs of religious worship, and especially in order to increase the salaries of parish priests." Mendel regarded this bill as unconstitutional and refused to pay the tax on the monastery at Altbrunn. Instead he offered to send a "voluntary contribution" to the state treasury, "since I do not close my eyes to the fact that an increase in the Moravian religious fund is necessary."

The state refused to accept the contribution and Mendel refused to pay the tax. For several years the obstinate struggle went on In turn the government tried to persuade him with

promises of promotion and to intimidate him with threats of punishment. But Mendel refused to be either cajoled or frightened. His intimate friends advised him to give in. Mendel's only reply was to accuse these friends of having turned against him. He regarded himself as a "lonely crusader struggling for the right" The state, on the other hand, looked upon him as a "foolish old man who refuses to obey the law."

As the years advanced and the struggle remained undecided, Mendel began to suffer from a pathological irritability. He complained before his nephews that he was persecuted. "There is a plan being concocted to send me to a lunatic asylum."

Such was the clouded and embittered atmosphere in which he spent the remaining years of his life. His one desire was to live to see the day when the "obnoxious law" against his monastery would be revoked. This desire was not destined to be fulfilled. In the spring of 1883 he suffered a heart attack. He recovered partially from this attack, and spent the last few months of his life "among his flowers and his birds and his bees." He had attached a wire cage to the monastery beehives and he had placed a number of bees in that cage. When one of his visitors asked him the reason for this "segregation" of the bees he explained jestingly· "I have put a queen there, together with a number of drones. The queen is choosing a proper husband, for it is just as unfortunate among bees as it is among human beings when a good woman is mated to a bad man." He was still experimenting with the laws of life though he knew that his own life was at an end.

The end came on January 6, 1884. A great concourse of people mourned the passing of a lovable though rather obstinate old priest. But not a single one of the mourners realized that a supreme scientist had just passed away.

PASTEUR

Great Scientific Contributions by Pasteur

Researches in fermentation.

Discovered remedies for silkworm diseases, chicken cholera, anthrax, etc

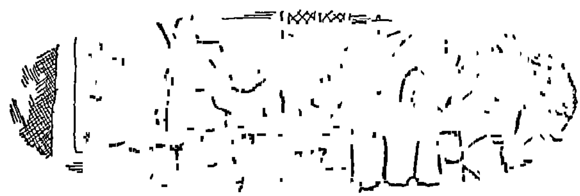
Introduced the process known as *pasteurization.*

Established the germ theory in animal and human diseases.

Instituted the practice of disinfection in surgical operations and of inoculation against hydrophobia.

Louis Pasteur

1822–1895



He is the meekest, smallest and least promising pupil in my class,” wrote the schoolteacher of Louis Pasteur. But the youngster had an insatiable curiosity. “Let me remind you,” observed his teacher one day, “that it’s the pupil’s business not to *ask* questions but to *answer* them.”

And he possessed another rare quality—a patient tenacity for work. “The three most important words in the dictionary,” he wrote while still in his early teens, “are—*will, work, wait*. These are the three cornerstones upon which I shall build the pyramid of my success.”

II

The son of a tanner, he got the smell of the leather in his blood. Once, when he was ill and homesick while studying at the *École Normale* in Paris, he wrote to his father: “If I could only catch a whiff of the tannery once more, I’m sure I’d get well.”

From the smell of the tannery to the “odors of the laboratory” was but a step. From earliest childhood he had made up his mind to be a chemist. “Too bad he’s wasting his time on this useless science,” said the villagers of Arbois to his father. But

Pasteur *père* had faith in his son. "I know I can depend upon Louis to do the right thing."

Yet even his father had begun to have his doubts when Pasteur received his Bachelor of Science degree with nothing better than a "mediocre" in chemistry. "Just be patient and trust me," wrote the unsuccessful student to his father. "I shall do better as I go on."

And he went on to study for his doctorate in chemistry. In order to earn his expenses he accepted a number of private pupils, teaching them from five to seven in the morning. And in order to stretch his earnings as far as possible he rationed his food, his recreation and his firewood down to the bare level of subsistence. He frequently suffered from hunger pangs. "But fortunately I was also subject to frequent headaches, so that the one pain tended to cancel out the other."

During this period he received further fuel to his ambition in the lectures of the great chemist, J. B Dumas "You cannot imagine the popularity of these lectures," he wrote to his father. "M Dumas is not only a scientist but a poet as well He arouses the curiosity and kindles the imagination."

Spurred on by this man of superior understanding, Pasteur wrote two theses, instead of one, for his doctor's degree. When the news of this degree arrived at Arbois there was great rejoicing in the Pasteur home "We cannot judge your essays," wrote his father, "but we certainly can judge your character. You have given us nothing but satisfaction."

Indeed a satisfactory if not a brilliant career was now open to Pasteur He received an appointment as laboratory assistant to Professor Laurent at the *École Normale*. He entered upon a series of experiments in crystallography—the study of the forms and the structures of chemical crystals—and he began to attract notice as a young man who was likely, "through sheer doggedness, to attain a fair measure of distinction."

And then suddenly he threw all his chances to the winds. The Revolution of 1848 had broken out. Pasteur's imagination took

flame "at the altar of freedom." He sacrificed his savings of a hundred and fifty francs to the cause and offered, "should the occasion arise," to sacrifice his life He left his position at the college and enlisted in the National Guard at the city of Orleans.

Fortunately the occasion for his supreme sacrifice did not arise When the Revolution was over he returned to his laboratory and to his interrupted study of "crystalline formations in chemical substances" As a result of his painstaking researches in this field, he laid the foundation for the discovery of several new chemical compounds "It is merely a matter of constructing new kinds of buildings," explained Pasteur, "through the chance discovery of bricks and stones cut into new shapes and sizes"

His modest "chance discovery"—actually the result of many months of assiduous research—came to the attention of M. Pouillet, professor of physics at the Sorbonne This eminent scientist provided Pasteur with a letter of recommendation that served as an open sesame to the doors of the University of Strasbourg "M Pasteur," wrote Professor Pouillet, "is a most distinguished young chemist. He has just completed a remarkable series of experiments. Given the opportunity at a first class university, he should go very far . . ."

In January, 1849, Pasteur entered upon his duties as professor of chemistry at Strasbourg And at once he set to work upon a new research—the way to a woman's heart. The young woman in question was Mlle Marie Laurent, the daughter of the rector of Strasbourg University. Shortly after his arrival at the university he wrote to the rector announcing his intention to propose to his daughter. "My father is a tanner at Arbois My (three) sisters help him in his business and in the house, taking the place of my mother whom we have had the misfortune to lose last May. My family is comfortably off but not rich . . . As for myself, I have long ago resolved to surrender to my sisters the whole share of the inheritance which would eventually be mine I have therefore no fortune. All that I possess is good health, good courage and my position in the University . . . I

plan to devote my life to chemical research with—I hope—some degree of success . . . With these humble assets I beg to submit my suit for your daughter's hand"

The rector, like a sensible father, turned the letter over to his daughter and told her to make her own decision. The decision was unfavorable. But Pasteur was too well trained a scientist to give up a problem after a negative first result. "I am afraid," he wrote to the young lady's mother, "that Mlle Marie attaches too much importance to first impressions, which can only be unfavorable to me There is nothing in me to attract a young girl. But memory tells me that when people have known me well, they have liked me." And like a good scientist who neglects no avenue of approach to the possible solution of his problem, he wrote a letter to Mlle Marie herself "All that I ask of you, Mademoiselle, is not to judge me too quickly. You might be mistaken, you know Time will show you that under this cold and shy exterior there is a heart full of affection for you."

His precise and persistent method won out The marriage was announced for May 29, 1849. But at the last moment there was a hitch. The guests had arrived, the bride and her parents were waiting, the priest was ready for the ceremony—but there was no groom. "Where in the world is that young chemist?"

Where, but in his laboratory? His best friend, Chappuis, hurried down to the laboratory and found him there leaning over his test tubes.

"Did you forget about your wedding?"

"No."

"Then what are you doing here?"

"Finishing my work, you idiot Surely you wouldn't expect me to quit in the middle of an experiment!"

III

His wife never regretted her decision to marry him. At times, to be sure, she scolded him for his "excessive absorption" in his

work. "But I comfort her by saying that I shall lead her to fame."

And he did lead her to fame. And to sorrow. For it was not easy to be the wife of a scientist whose very brilliance aroused the jealousy and the hatred of his less gifted fellow scientists.

This jealousy and this hatred began to crop out at the very beginning of his career His investigations had led him from chemistry to biology "I am pursuing as best I can," he wrote to Chappuis, "the impenetrable mystery of Life and Death. I am hoping to mark a decisive step very soon by solving . . . the celebrated question of spontaneous generation." His closest friends urged him to refrain from this study. "I would advise no one," wrote Dumas, "to dwell too long on so controversial a subject."

For the origin of life was too "touchy" a question to be examined scientifically. Tradition was firmly and aggressively on the side of those who believed that life can originate spontaneously out of dead matter. Aristotle, for example, had declared that "life can be engendered by the drying of a moist body or by the moistening of a dry body." Virgil had stated that "bees can spring into life out of the carcass of a dead bull." Van Helmont had advanced the even more fantastic "method for the creation of mice" in the full-grown state· "Press a quantity of soiled linen into a vessel containing some grains of wheat or a piece of cheese for about three weeks, and at the end of this period the adult mice, both male and female, will spring up spontaneously in the vessel"

It was against this sort of traditional superstition that Pasteur dared to undertake his series of experiments And immediately the older scientists began to aim their poisoned shafts against him Especially virulent were Professor Pouchet, director of the Natural History Museum of Rouen, and Nicolas Joly, professor of physiology at the University of Toulouse. These two men, in order to "prove" their point against Pasteur, undertook a series of "experiments" which were neither adequately prepared nor accurately executed. "M. Pouchet and M.

Joly," wrote Pasteur to his father, "may say what they like, but truth is on my side. They do not know how to experiment. It is not an easy art; it demands, besides certain natural qualities, a long practice which naturalists have not generally acquired nowadays." But his opponents went vigorously ahead with their denunciation of Pasteur. Proclaiming to the world that they had "definitely established the fact of spontaneous generation," they called Pasteur a "circus performer, a charlatan and a clown." Pasteur bore all this contumely with a patient smile. "A man of science," he explained to his wife, "should think of what will be said of him in the coming centuries, not of the insults or the compliments of the present day."

Finally the controversy as to the probable origin of life was referred to a commission of eminent scientists, including Professor Dumas After a thorough examination of the findings submitted by Pouchet and Joly on the one hand and by Pasteur on the other, they handed down a decision in favor of Pasteur. "Life alone can produce life."

IV

HAVING established the evidence as to the *origin* of life, Pasteur next became interested in the problem of the *preservation* of life A mysterious disease had attacked the silkworms in the province of Alais and the entire silk business of France was threatened with ruin Pasteur, whose achievements had now won him a seat in the Academy, was invited to investigate and if possible to check the disease. Again a tempest of abuse descended upon his head. This tempest increased in volume as month after month went by and Pasteur was able to make no headway against the epidemic. "What does a chemist know about matters of healing?" complained the mulberry cultivators whose silkworms were dying by the thousands every day And the public took up the cry. "A chemist? Not even that. He's nothing but a parasite living on the fat of the land while the business of

France is heading for a crash." To all of which outcries and complaints Pasteur had but a single reply—"Patience"

And he needed patience. While he was investigating the silkworm epidemic one of his children died. Then another, and a third. "To go on persistently with your work under such conditions," remarked a friend, "must require a great deal of courage." "I don't know about my courage," replied Pasteur. "But I do know about my duty."

He stuck to his duty eighteen hours a day, from five in the morning to eleven at night. He suffered a paralytic stroke, and for a time the doctors despaired of his life. Yet his mind was active while his body lay paralyzed. It was in the "restful hours of his illness" that he discovered the solution to the problem upon which he had spent so much of his labor and strength. "The disease of the silkworms is inherited through diseased eggs from one generation to another. Eliminate the diseased eggs and you will produce a healthy crop of silkworms."

A simple solution after a heartbreak of toil Yet the abuse against Pasteur did not stop even then. The silkworm seed merchants, who saw in Pasteur's formula an end to their indiscriminate selling of "bad seed for good money," began to spread malicious stories about him As a result of these stories, the word passed around that Pasteur had utterly failed in his effort to stop the disease and that he had been driven out of Alais under a shower of stones.

When Pasteur heard this report—he was recovering from his paralysis at the time—he merely shrugged his shoulders once more. "Patience."

And his patience had its reward. The silkworm cultivators tried his remedy—and in every instance produced healthy crops. The grateful countryfolk of Alais set up a statue in his honor. But he found greater pride in "the honor of having alleviated, at my personal sacrifice, a misfortune that threatened my country."

V

His personal sacrifices had traced their story on his pale furrowed face and in his stern sad eyes. For his efforts in behalf of his fellows he received inadequate pay. Nor did he require more than he received. Once, when he visited Napoleon III and the Empress Eugénie, the imperial couple expressed their surprise at his failure to derive financial benefit from his scientific work. "In France," replied Pasteur, "a scientist would be lowering himself if he worked for personal profit." At no personal profit he undertook a series of experiments on the diseases of wine. Within a single year the French wine industry had lost several million dollars as a result of the mysterious "souring" of the produce. After a careful investigation of the matter, Pasteur discovered that this souring was due to the action of bacteria in the fermenting liquid. His problem now was to destroy the bacteria without at the same time injuring the quality of the wine. He tried several antiseptic substances, but with no result. And then he tried heating the wine to various temperatures—and came upon a tremendous discovery. If he raised the wine to a temperature of 55 degrees centigrade (about 131 degrees fahrenheit), he found that he could thus preserve the quality of the wine and at the same time destroy the poison of the bacteria.

Such was the origin of the now universally accepted process known as *pasteurization*—a process applied not only to wine but also to many other varieties of perishable foods and drinks—especially to cream and milk. If the world today enjoys a greater degree of health than was known in earlier generations, no small part of the credit is due to the patience of Pasteur in his study of the fermentation of wine

VI

"To HELP mankind" was the primary object of his life He entertained the hope for a day of better health, higher aspiration

and a greater understanding between man and man. "To moral cooperation through international science." But in 1870 Kaiser Wilhelm I and his chancellor of the crimson fist proclaimed a different kind of doctrine—"the glorification of force and the extinction of moral justice." And their army proceeded to put this doctrine into practice

When the German army invaded France, Pasteur offered his services to his country, but his partial paralysis disqualified him for fighting He showed his contempt for the German military madness, however, by returning an honorary diploma of Doctor of Medicine which he had received from the University of Bonn. "I am led by my conscience," he wrote to the Principal of the Faculty of Medicine, "to request that you efface my name from the archives of your university, and to take back that diploma, as a sign of the indignation inspired in a French scientist by the barbarity and hypocrisy of him (Kaiser Wilhelm) who, for the satisfaction of his criminal pride, persists in the massacre of two great nations." And the answer from Bonn was couched in the characteristic arrogance of the aggressor· "M Pasteur—The undersigned, now Principal of the Faculty of Medicine of Bonn, is requested to reply to the affront which you have dared to offer to the German nation in the sacred person of its august Emperor, King Wilhelm of Prussia, by conveying to you the expression of its utter contempt . . . P S. Wishing to keep its files free from taint, the Faculty returns your letter herewith."

With a heavy heart Pasteur noted the depredations of the invading army whose rule for conquest, as formulated by Bismarck, was "to leave the inhabitants of occupied territory nothing but their eyes to weep from."

Added to Pasteur's general distress was his personal anxiety about his son who had enlisted in the French army and who was now fighting under General Bourbaki. The news reached Pasteur that Bourbaki had sustained a disastrous defeat and that his army was fleeing before the onslaught of the Germans. The stricken old chemist and his wife started off in search of their

son—hoping against hope that he might still be numbered among the living. In a dilapidated old carriage—the only vehicle available at the moment—they set out from Arbois and followed the snow-covered route of the retreating army Everywhere the highways were littered with the bodies of the dead. Everywhere the sick and the wounded stragglers, their uniforms hanging in tatters from their frozen bodies, were begging for food and for the comfort of a blanket to wrap around their shoulders And everywhere a desolate old man kept repeating the self-same question: "Have you seen Sergeant Pasteur?" The invariable answer was a negative shake of the head. Nobody knew whether Sergeant Pasteur was dead or alive. "All I can tell you," said one of the stragglers, "is that out of twelve hundred men in his battalion of *Chasseurs*, only three hundred are left."

Slim chance of ever meeting their son again. . . .

At last, however, there was a ray of hope. Their all but dismantled carriage had just limped into Pontarlier. A group of shivering soldiers were huddled over a fire "Sergeant Pasteur? Yes, we saw him yesterday . . He is still alive, but very low . . Perhaps you can meet him on the road to Chaffois . . ."

Out of Pontarlier toward Chaffois. A cart was rumbling over the frozen road Within it, on a bundle of straw, lay a soldier covered with a ragged coat. It was too dark to make out his features. The questing old chemist turned to the driver of the cart "Have you seen Sergeant Pasteur?"

The soldier raised his head. "Father! Mother!" . . .

He recovered from his wounds, rejoined his regiment, and survived the war. A grain of comfort in the sorrowful life of Pasteur.

VII

After the war Pasteur continued with his self-imposed task of arresting disease In his researches on the silkworm epidemics and on the fermentations of wine he had discovered a single vital principle—that the malady in each of these cases was due

to the presence of poisonous micro-organisms, or germs. Why not apply this principle in the treatment of human disease?

Pasteur was especially interested in trying out his ideas in surgery. The death rate that followed surgical operations was appalling In the great majority of cases the decision to operate upon a patient was tantamount to a death sentence. "The opened wound," as Pasteur pointed out to a gathering at the Academy of Medicine, "is exposed to millions of germs—in the air, on the hands of the surgeon who performs the operation, in the sponges that bathe the wound, in the instruments that pry into it, and on the bandages that cover it"

When the members of the French Academy heard these words, they smiled into their beards and shook their heads and went on killing their patients with their "good old-fashioned" methods. In Scotland, however, there was one man who paid heed to Pasteur's warning This man was Joseph Lister, professor of surgery at the University of Edinburgh. Following Pasteur's advice he submitted every object involved in the operation—his hands, his instruments, the sponges, the bandages and even the area surrounding the incision—to a thorough disinfection of carbolic acid. And with splendid results. Within two years he reduced the fatalities of his surgical cases from ninety per cent to fifteen per cent.

Yet the surgeons of the French Academy remained stubbornly opposed to Pasteur's theory of disinfection, even in the face of Lister's successful application of this theory It was a new idea and therefore—they argued—it was a *bad* idea

As for Pasteur, he was ready to accept and to fight for any idea—especially in the field of medicine—as soon as it was definitely supported by adequate facts. "The facts with regard to surgery have demonstrated, beyond the shadow of a doubt, that many a patient has died through the poisonous action of the Infinitesimally Small." And so he entered upon a crusade to stamp out a double source of infection—the physical microbe that attacked the human body, and the "mental microbe" that

retarded the human mind. "I will force them to see in spite of themselves," he said again and again of his opponents. "They *must* see!" One day a member of the Academy of Medicine was lecturing to his colleagues on puerperal (childbirth) fever—a disease which in 1864 had killed over three hundred women in the Paris Maternity Hospital alone. The lecturer was explaining his ideas as to the cause of this fever, when a voice interrupted him: "Nonsense and fiddlesticks! It isn't any of the things you mention, but the doctors and the nurses that are responsible for puerperal fever. They murder the mothers by carrying the microbe from an infected patient to a healthy one!"

"And can you tell me," asked the lecturer sarcastically, "what this microbe of yours looks like?"

Whereupon Pasteur walked to the blackboard, took a piece of chalk and rapidly sketched the outline of a chain-like organism. "There, that is what it looks like"

The meeting was thrown into an uproar. The older doctors insisted that Pasteur was an interloper, an amateur, a man who knew nothing whatsoever about medicine and who had better stick to his chemicals and his crucibles The younger men, however, paid heed to his words Little by little they introduced his methods of sterilization until, as one of Pasteur's biographers (L. Descours) remarks, "the maternity hospitals ceased to be the ante-chambers of death."

VIII

PASTEUR continued to befuddle the reactionaries, to bring down their denunciations upon his head, and to fight his scientific battles for the preservation of life. Through his methodical process of repeated experimentation he discovered the principle of immunizing a person against the *violent* form of a disease by inoculating him with a *mild* form of that disease. This simple method of transforming a virus into a vaccine has saved an incalculable number of lives.

He first employed this discovery in the stamping out of an epidemic of anthrax—a deadly fever of the spleen—that threatened to exterminate the sheep and cattle industry of France. In the course of his researches in this field he was obliged, as usual, to fight not only against the virulence of the plague but against the equally stubborn virulence of human prejudice. At one of the meetings of the Academy of Medicine, Pasteur accused his adversaries of malignity as well as of stupidity Whereupon one of the physicians, Dr Jules Guérin, started up from his chair and made a rush at Pasteur. The pugnacious doctor was held back by a fellow member of the Academy, but the meeting ended in a general uproar.

The next day Guérin challenged Pasteur to a duel. But Pasteur returned the challenge. "My business," he said, "is to heal, not to kill"

And then came the most dramatic episode in his lifelong business of healing—his famous battle against hydrophobia For some years he had been experimenting with the inoculation of the saliva of mad dogs into healthy rabbits At times he varied his experiments by subjecting the rabbits directly to the bites of the mad dogs On one occasion a large bulldog, though furious with pain and foaming at the mouth, persistently refused to bite the rabbit that had been thrust into his cage It would be necessary, concluded Pasteur, to *suck* the saliva out of the dog's jaws and then to inject it into the rabbit

The dog was tied securely upon a table and Pasteur, with a glass tube in his mouth, bent down to the mouth of the enraged animal "This," wrote a bystander, "was the supreme moment of Pasteur's life" Calmly, as if unaware of the fact that he was courting death, he sucked the venomous saliva drop by drop into the tube. And then, when he had gathered a sufficient quantity of the poison into the tube, he turned to his assistants. "Well, gentlemen, we can now proceed with the experiment."

Within a few months after this experiment an Alsatian boy, Joseph Meister, was bitten by a mad dog. His mother, on the

advice of the local physician, took him to Pasteur. Here was an opportunity to test out on a human being the anti-rabic inoculation that had proved so successful in the case of animals

Yet Pasteur hesitated How certain could he feel that his remedy would succeed? Was it not within the realm of possibility that the inoculation, instead of preserving the victim's life, would only introduce a more aggravated type of the disease? Was he therefore justified in taking the risk, especially when it concerned another person's life?

He took the risk. And he won. The night following the final inoculation was one of sleepless terror for Pasteur but of peaceful sleep for the stricken child Thirty-one days passed, and there were no recurring symptoms of the disease The boy was completely cured. Pasteur had conquered hydrophobia.

IX

A NUMBER of belated distinctions—election to the Academy, the Cross of the Legion of Honor, medals, ribbons, diplomas, banquets, ovations, parades—and Pasteur remained through it all a modest seeker for truth His present popularity was as amazing to him as his earlier disgrace. "I can't understand why people make such a fuss over me." Elected by the Government to represent his country at the International Medical Congress in London, he entered St James's Hall amidst a thunder of cheers. Unaware that he was the cause of the acclamation, he turned to his escort "It must be the Prince of Wales arriving. I'm sorry I didn't come earlier."

He returned to Paris and to his work at the Pasteur Institute—a hospital built in his honor for the combating of infectious disease And here he spent the rest of his days in his "humble effort," as he expressed it, "to extend the frontiers of life"

His seventieth birthday was the occasion of a national holiday. Pasteur attended a celebration in his honor at the Sorbonne. He was too feeble, however, to express in person his thanks to

the delegates who had come from various countries to join in the celebration. He asked his son to read his speech for him. "Gentlemen . . . you bring me the greatest happiness that can be experienced by a man whose invincible belief is that science and peace will triumph over ignorance and war . . Never permit the sadness of certain hours which pass over nations to discourage you . . . Have faith that in the long run the nations will learn to unite not for destruction but for coöperation, and that the future will belong not to the conquerors but the saviors of mankind . . ."

This was Pasteur's farewell message to the world.

KELVIN

•

Great Scientific Contributions by Kelvin

Experiments in the measurement of the atom, heat, refrigeration, electricity, etc

INVENTIONS:

Siphon recorder

Galvanometer.

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BOOKS AND TREATISES:

On Natural Philosophy

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Popular Lectures and Addresses (3 volumes).

The Wave Theory of Light.

The Molecular Tactics of a Crystal.

The Dynamic Theory of Heat.

Lord Kelvin
(William Thomson)
1824–1907



HE CAME of a race of Scotch Covenanters who had been persecuted out of their country for their religion. At the age of twelve he lost his mother. His father, a professor of natural philosophy at Glasgow University, provided for his six children a system of education that would toughen their minds for the protection of their hearts. He planned this system of education to be wide as well as deep. Almost from infancy the children grew up with a friendship for extended vistas of thought. They absorbed the principles of geology and of astronomy. Plants were their playmates. They learned about the struggles of empires to gain new victories and about the struggles of ideas to win a foothold among men. Around the table they peered with fascination at the toy globe of the earth and took dream trips to its furthermost limits. And then they transferred their gaze to another and vaster globe that their father had bought for them—the sphere of the heavens with its epic story of which the earth was merely a syllable.

William was the youngest of the children, but he had the keenest imagination of them all. He found himself spellbound by this tale of the two globes. At an early age he had accepted

the challenge to unravel the mystery of its plot. When he was sixteen years old he transcribed in his diary an eleventh commandment—an intellectual call to his reason just as the Ten Commandments were a religious call to his conscience.

Mount where Science guides·
Go, measure earth, weigh air, and state the tides;
Instruct the planets in what orbs to run,
Correct old Time and regulate the sun.

II

HIS RISE to intellectual maturity was rapid At seventeen he entered the University of Cambridge. At eighteen he wrote an outstanding paper on the dynamics of heat and contributed several articles to the *Cambridge Mathematical Journal* Upon graduation he met some of the leading physicists of France and of England and gave them valuable suggestions on their researches At twenty-two he was appointed professor at the University of Glasgow

His aggressive vitality was rather too much for the mild-mannered Scots who served as his colleagues on the faculty Hardly had he been elected to an honor coveted by many a gray-haired rival when he determined to revolutionize the department of physics at Glasgow. He came to his elders with a request for a room where he might carry on his experiments outside of his classes. It was an unheard-of piece of audacity For generations the economical Scottish professors had been content to mess up their lecture halls with their experiments. Why in the world should this young upstart require a special room all by himself?

Yet their curiosity got the better of their resentment. "If you insist upon it, you can have the old cellar from which we'll remove the wine barrels."

And thus the first modern laboratory in the British Isles was born in a wine cellar

Young Thomson set to work with the gusto of a hurricane.

He was the perfect personification of his own theory of dynamics Organizing a staff of thirty volunteers from his class of ninety students, he kept them going at a furious pace. The work piled up so rapidly that he found he needed more space—"an extra room for thinking"

Again his colleagues looked at him in amazement "You may occupy the tower," they said

From morning to night he plumbed the depths and scaled the heights. From experimental activity to abstract speculation. And in the evening he walked to his home—only fifty yards away—where the body of the technician and the soul of the philosopher resigned themselves to the sleep of a man in perfect health.

III

AGAIN the dynamite of his energy exploded amidst the conservatism of his colleagues He demanded still more space. And again they acceded to his demand. "Professor Thomson, you have a marvelous genius for annexation."

The academic and the lay world alike were mystified at the outpouring of his enthusiasm For a period of weeks the visitors who came to the laboratory to watch him at his work were startled to find him blowing soap bubbles. And all the students in the room walked back and forth for hours with their faces puffed and their eyes shining as they kept releasing bubble after bubble into the air. One of the visitors ventured to ask for the meaning of all this activity.

The professor glared at him for a few seconds. And then in a tone that implied pity for anyone who was unable to draw his own conclusions from such obvious evidence, he replied: "I am calculating the thickness of the uncolored spot on the soap bubble. I have found that this thickness measures one twenty-millionth of a millimeter." The following month he confided to another visitor that he had ordered his students to smoke their pipes and to blow rings from their lips in order to illustrate the

dynamical model of the atom. "I have measured the atom, too," he explained "I have found it to be one two-hundred-millionth of a centimeter in size."

He was exciting to the students, this mercurial professor of theirs. One never knew what he was going to do next. One day his friend Helmholtz, the German scientist, came to the laboratory and watched his experiment with a gyroscope. A heavy metal top was spinning rapidly The professor wanted to show that the top would become rigid in its rotation and hoped thus by analogy to prove the rigidity of the earth Suddenly he seized a hammer and hit the top a crashing blow The metal flew off in a centrifugal direction and crashed through Helmholtz's hat which was hanging on a rack The students were in an uproar. Helmholtz joined feebly in the laughter. "Something went wrong," explained the professor innocently. "I'll buy you a new hat."

There was nothing dull about his teaching. "I've put an end to the reading of stale essays," he said. His classroom and his research laboratory were packed with all sorts of apparatus. Nothing was left to the imagination Gadgets were heaped upon tables, they hung from the ceilings, they were fastened to the walls. Triple spiral spring vibrators, a pendulum thirty feet long with a twelve pound cannon ball suspended from the end, a terrifying machine in which a number of billiard balls kept speeding hither and thither to illustrate the dynamics of a nebula, heaps upon heaps of gyroscopes He whirled one on top of the other, he twisted and tortured and juggled them in his efforts to study the gyrations of the planets. In one corner, suspended from the ceiling, was an innocent-looking device—a metal ring covered with rubber "to illustrate the nature of the dewfall." One day he called for water and poured it upon the ring until the rubber bulged downward More water Finally the rubber burst "like an overburdened dewdrop"—right over the heads of the students sitting in the front row. "I always like my illustrations to soak in," chuckled the professor.

His "lectures" were not lectures at all in the usual sense. They were feats of mental—and of physical—gymnastics "He sprang like a tiger into the classroom," observed one of his students, "tearing off his professor's gown as he bounded down the aisle to the platform" He hurried through the prescribed text in the Bible and then looked smilingly at the students. "Today I will lecture on the propagation of luminar motion through a turbulently moving inviscid liquid."

They hardly understood a word of what he said But they were fascinated by his gestures When he talked about the dance of the stars, he was as likely as not to execute a jig upon the platform. A solemn algebraic formula—and then presto. He would reach for the pointer and balance it on top of his finger while a hundred men held their breath "See here If I balanced this pointer upon a granite mountain, it would strain the entire earth" When he lectured on the principles of sound he produced an old French horn that he had played in the orchestra during his college days and blew upon it a mighty musical blast as the students rose to their feet and cheered. If he spoke on the principles of velocity, he took out an old rifle that he had once carried as a guardsman and fired a volley of shots at the pendulum.

Like all other men of vigorous personality, he had his prejudices. He was particularly incensed against the "muddled human system of weights and measures." And for good reason. Once, while preparing to shoot at the pendulum, he had instructed his assistant to load the rifle with a "dram" of powder. He was referring to the avoirdupois dram. But the assistant thought he wanted the apothecaries' dram, which is twice the amount of the avoirdupois unit. Accordingly he put into the rifle a sufficient charge of powder to have blown off the professor's head—and the heads of a few of his star pupils as well. Happily the marksman, just as he was about to fire, discovered the error. "I have always been suspicious of the words and the works of the human mind," the professor sighed.

IV

As FOR HIMSELF, he was a man of precise words and of practical works. He took a greater interest in concrete mechanical devices than he did in abstract mechanical laws. He had assumed the active directorship of a factory in addition to what he called his "passive" professorial duties. When the French physicist, Joule, had announced his startling theory that heat was an energy which could be transformed into work he immediately seized upon the practical application of this theory and busied himself with plans to harness the energy for industrial use. He devoted a great deal of thought to the concept that was making its way into the physics of the mid-century—the idea of energy as the source of matter From his study in thermodynamics he caught a glimpse of the mighty principle of the transformation and the indestructibility of energy—and this eminently practical man who thought of all knowledge in terms of its "usefulness" to humanity, found himself paradoxically enough embarking upon a theoretical philosophy of life. "Every planet," he explained to his pupils, "is like a toe dancer. It is poised and balanced. It is all aquiver with living energy" But what was the *nature* of this energy? At fifty-three he began to write a book on the subject. But he never completed it, for he could find no answer to his question

His study of thermodynamics—the energizing power of heat—ranged all the way from the outermost limits of the universe to the confines of his own person He wore a woolen vest as a sort of thermostat to regulate the temperature of his body. Whenever he felt cold he would pile on several more vests, whenever he felt warm he would discard them. In the winter it was nothing for him to wear eight or nine of these vests To his friends who laughed at this idiosyncrasy he declared haughtily "To every man his proper vest, to suit his time and temper best." Life was all a matter of temperature.

He constantly observed his surroundings with a view to improving them—not only for himself but for the general public as well. One day he looked at his supper with a sudden inspiration. Why not apply his studies of the human body to the heating and the cooling of food? At high temperatures the molecules of matter are extremely active At low temperatures they are extremely sluggish Heat hastens the process of change; cold retards it Across the channel, in France, Pasteur had demonstrated the fact that germs could be destroyed at very high temperatures and that foods could be preserved by a process of boiling. Here in England it dawned on Thomson that germs might also be destroyed at very low temperatures and that food could thus be preserved by the process of cooling! Such was the paradoxical practicality of William Thomson's mind.

As he walked over the fields early in the morning he observed how the dew had helped to protect the vegetation from the frosts of the night. And in this simple protective process he beheld the principle of one of the most modern of the arts—refrigeration Thus two contemporary scientists were almost simultaneously harnessing the heat and the cold for the better health of mankind. The future generations were to subsist largely upon a diet of pasteurized liquids and kelvinized solids.

But the English physicist was more fortunate than the French chemist. While the Frenchmen hounded Pasteur almost into the grave the Englishmen raised Thomson to a peerage.

And so "Wullie Tamson"—as his Scottish friends still called him—became the first Baron Kelvin. The king took him into his council, and people bowed and scraped before him. But "Wullie Tamson" remained the same honest, energetic, outspoken, playful child of a man It was with a childish delight that he once heard himself announced at a dinner party on the occasion of his visit to America. Unexpectedly detained on important business, he had been late in arriving at his friend's house Six-thirty, seven, seven-thirty—and still no sign of Lord Kelvin. Everybody was alarmed when suddenly the draperies

were parted and the colored butler announced with a booming voice. "Ladies and gen'lmen, de Lawd am come!"

It was as a judge of the scientific section at the Centennial Exposition in Philadelphia that Lord Kelvin had been invited to America. He spent six weeks examining every mechanical device on the exhibition grounds. Finally, as he was getting ready to depart, a friend asked him to look at a "funny little contraption" lying on a table in an out-of-the-way corner. Kelvin walked over to the table Several of the judges were making sarcastic remarks about the "contraption" as the inventor tried to explain its use. Kelvin picked up the instrument and looked at it. At this moment a pompous individual walked up to the table It was Dom Pedro, the emperor of Brazil. He held out his hand to the inventor. "Professor Bell, I am delighted to see you again."

"Thank you, Your Majesty."

"Tell me, have you made any further progress with your telephone?"

"If it please Your Majesty, pick it up and listen. I shall go to the other end of the room and say a few words"

Alexander Graham Bell walked to the end of the wire Dom Pedro took the instrument in his hand "My God, it talks!"

"Do you mind if I try it?" It was Lord Kelvin speaking. Then, as he put the instrument to his ear—"It certainly does talk! It's the most amazing thing I've seen in America!"

And he returned to England determined to put this "most amazing" of inventions before the British public He encountered a torrent of abuse from every newspaper and magazine in the country. "The inventor of the so-called telephone is an impostor—a ventriloquist—a fraud" The *London Times* devoted a column to the "scientific" explanation of the reasons why the human voice could never be sent along an electric wire But Kelvin persisted And finally he got the British public to listen to the new voice.

V

HIS UNFLAGGING ENERGY prompted him to take an active part in every scientific endeavor. Having interested himself in Faraday's magnetic and electric researches, he had found an opportunity to translate his predecessor's theories into practical use. He had been appointed technical advisor to the company organized by Sir Charles Bright and Cyrus Field for the purpose of laying the Atlantic cable between England and America It was Kelvin's perfection of the galvanometer—or needle detector—which "picked up" the almost imperceptible current of electricity that trickled out from the cable after a trip of over two thousand miles. And it was Kelvin's invention of the siphon recorder—or electric pen—which finally "wrote out" the cabled message in a wavy line upon a piece of paper

A wavy line upon a piece of paper—nothing more. Kelvin was a hard-headed scientist. He laughed at the effusions of the poets who rhapsodized about the "miracles" of his inventions He saw life as an essay in logic and not as a work of art. One day his friends took him to hear a Beethoven symphony. He was greatly impressed He reached for his little notebook with its green covers—he had filled hundreds of them with his observations. "Think what a complicated thing is the result of an orchestra playing," he wrote. "Think of the smooth gradual increase and diminution of pressure . . . A single curve, drawn in the manner of the curve of the price of cotton, describes all that the ear can possibly hear . . ."

Lines and curves and angles of energetic power—such was the world concept of this tough-minded man of science. Tough-minded and gentle-hearted. For seventeen years he took care of an invalid wife. Every morning he carried her down to the parlor and every evening he carried her up to bed. And when she died, he was for a time inconsolable

But nature smites with one hand and caresses with the other.

Three years after the loss of his wife he found another woman. It was a strictly scientific courtship. He had met her at Madeira while he was superintending the construction of a cable from England to Brazil. He taught her the art of telegraphy. For sixteen days they exchanged innumerable dots and dashes of love—he from the ship where they were repairing the cable, she from her villa on the shore. Finally, as the ship was steaming away, he signaled to her in the code they understood so well: "I will come back for you." And she signaled in reply: "I will wait."

VI

As HE GREW OLDER, he complained that the time was passing too rapidly for him. "A second is too short; we must have longer units." Every day he spent several hours dictating. A secretary on one side of him, a secretary on the other, each taking down notes on an entirely different subject Hustle, hustle, hustle! The years are fleeting! "Those who live slowly create their own obstacles." He had planned enough work for two centuries and his problem was to "finish it in a single lifetime." Always he gave orders, always he expressed opinions, always he "dissected" ideas—until his parrot, Dr Hookbeak, shouted shrilly at him from her cage: "Lord Kelvin! Lord Kelvin! Shut up!"

And now he was nearing the end of the road A lifetime of theories and inventions, only to be swept into the shadow by newer theories and better inventions. William Roentgen, Henri Becquerel, Pierre and Marie Curie—what a vast rich field they had opened up for future investigation! What a revolution they had produced in the scientific conception of the world! How inadequate was his own conception as compared to theirs! He smiled ironically on the occasion of the fiftieth anniversary of his assumption of the professorship at Glasgow. His friends were enumerating the achievements of his career—the new compass that was impervious to the oscillations of gunfire, the sounding wire that warned sailors against hidden rocks, the machine that

enabled men to forecast the tides, the instrument that registered the strength of an electric current passing through a wire, dozens of practical devices for the more accurate recordings of weights and measures, and so on and on. Mere toys for children. "I am not really an inventor. I am just a dreamer sleeping in the arms of the past."

Three years after his jubilee he resigned his professorship at the University of Glasgow The trustees informed him that they would have been glad to retain his services, but he shook his head "No sentimentality, if you please. I have outlived my usefulness."

He faced his students for the last time. "It has come to be my belief that as a man grows older, the pictures he looks upon with the most pleasure by his fireside are those which bring before him again his college days. . . . Make your whole life full of pictures which are bright, and clear, and clean"

And so he left his professorship But not the university. As long as there was breath in his body he could never break the last tie with old Glasgow At the beginning of the academic year of 1899 this aged scholar of seventy-six walked into the registration room along with the undergraduates and enrolled his name —"Lord Kelvin, Research Student." He was at last too wise to teach. From now on he would only learn.

And then the sagest of teachers, Death, sought out this student in his eighty-third year and led him forward to the Great Laboratory for his Final Experiment.

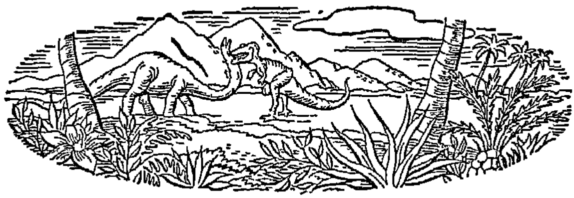
HAECKEL

Great Scientific Contributions by Haeckel

BOOKS AND ESSAYS:
The Riddle of the Universe.
History of Creation.
The Wonders of Life.
The Last Link.
General Morphology of Organisms.
Monograph on Radiolaria.
Evolution of Man.
Life in the Sea.

Ernst Heinrich Haeckel

1834–1919



"In a recent microscopical lecture," wrote Haeckel to his parents during his college days at Würzburg, "Professor Leydig suddenly stopped and pointed to me with the greatest astonishment. 'I've never seen the like of it in my life!' he cried. 'This young man can look through the microscope with the left eye while with the right eye he can draw what he sees . . .' This curiosity in my physical make-up," continued Haeckel, "is of the utmost importance in the study of natural history."

Together with his double physical vision Haeckel was blessed with a double mental vision. One half of him was an observant scientist, the other half, an imaginative artist. He was equally adept at sketching a human muscle and at painting a rural landscape. It was this combination of the seeing eye and the aspiring heart that made him one of the outstanding German personalities of the nineteenth century.

II

His stock was a mixture of nobility and peasantry—with the peasant element in the ascendant. He never to the end of his

days acquired the refined artificialities of the aristocracy. In his youth he describes himself as "a wild lad with chubby red cheeks and long blond hair . . . careless in my dress and frequently forgetful of my table manners." Shy in the presence of other people, he was passionately fond of walking, swimming and collecting all sorts of curious plants. Always on his holidays from school he went off adventuring into the forest in quest of "new specimens of growing and living things." When his elders asked him what he wanted to become he answered, "I will be a *Reiser*"—a childish form of the word *Reisender*, a traveler.

He was destined, however, to do most of his traveling on the mental rather than on the physical plane. His father, a government official, moved his family from Potsdam to Merseburg and from Merseburg to Berlin. But Ernst did not accompany his parents to Berlin. Instead, he matriculated at the University of Würzburg. Here he hoped to specialize in botany with a view to following "the footsteps of Humboldt and Darwin into the tropical forests." His parents, however, had other hopes for him. They wanted him to specialize in medicine.

His entire university career was a struggle between his distaste for medicine and his passion for botany "I am convinced," he wrote again and again to his parents, "that medicine is not my field." . . . "The study of disease fills me with an unconquerable disgust (which is due probably to weak nerves and hypochondria) and I shall never be able to adapt myself to it." On the other hand, he experienced the keenest delight whenever he discovered a new plant. "The day before yesterday I took a walk on the shore near the Main where the ships unload their cargoes. Suddenly I found among the shrubbery a strange, yellow-colored, cruciferous plant, related to the *black cabbage* but still quite unknown to me . . Can you imagine my ecstasy!"

But his parents couldn't imagine his ecstasy. They told him to forget about his plants and to stick to his medicine. And Haeckel dutifully complied with their wishes. He bought a microscope—having saved up the money for it by subsisting for a

time on "sour kidney and buttermilk soup"—and plunged faithfully into his anatomical studies. He successfully completed these studies and absorbed his *materia medica*—"the most terrible instrument of torture ever devised for the intellect of man"—and passed his examinations for the doctor's degree "And now, my dear parents, here I am—Herr Doktor Haeckel—a lanky, dried-up lath of a young medico, with shaggy, yellow-brown hair, a mustache and a beard—only three or four inches long—of the same color, and with a long pipe in his mouth." But when he comes home, Haeckel warns his parents, he will bring along with him something besides his microscope and his medical books. "You will have to reserve an extra room for a beautiful haycock (of plant specimens). This will become a pleasant addition to my botanical treasure house"

Even though he was now licensed to practice medicine, he looked upon "the hit-or-miss art of healing" as a high class form of quackery. "When you get sick," he said, "you can choose one of two courses You can leave it to nature if you want to recover, or you can go to a doctor if you want to die"

Nevertheless he was "reconciled," as he told his parents, "to the thought of a medical career." For several weeks he served as an interne at the Würzburg Hospital, attending to the births of "those rascally babies who insist upon coming into the world at an hour when all honest people ought to be sound asleep." His "obstetrical duties" came at a most inopportune time—precisely nine months after the Wurzburg Carnival. "During the period of my service at the lying-in hospital the babies arrived literally in shoals, so that I was awakened several nights in succession."

And yet, "since medicine is to be my career, I will try my best to endure it" Indeed, with the scientific nonchalance of the "finished" medical student he began to look forward to his first post mortem—"the most interesting, yea the *only* interesting part of medicine." And then he got his initial post mortem—an autopsy upon the body of a fellow interne "to whom I had

been talking intimately only a few days ago " This episode cured him of his medical ambitions for the rest of his life.

In deference to the wishes of his parents, however, he continued his medical practice for one year. But during this entire period he had only three patients—owing principally to the fact that he fixed his consultation hour from five to six in the morning. By the end of the year he had succeeded in proving to his father that he was not "cut out" for the medical profession.

What to do now? Unfit for medicine in spite of his training, he felt equally unfit for botany because of the *inadequacy* of his training For a time he played with the idea of devoting his life to landscape painting. But he realized that as an artist he was merely a gifted imitator and not a creative genius Good enough for an amateur—he painted in his lifetime more than a thousand landscapes—but woefully incompetent (he confessed to himself) for a professional.

And so at twenty-five he found himself confronted with a dark wall. Yet somewhere, he believed, an opening would rise unexpectedly out of this impenetrable darkness. For he had an eager faith in God—this young man who later was to deny His existence. In a letter to his parents he expressed his determination, under the guidance of heaven, to face the future unperturbed: "Fear God, do that which is right, and be afraid of no man."

III

JUST AS HE HAD EXPECTED he found his opportunity—or rather, he *seized* his opportunity—in the field of natural science He had wheedled his father into allowing him a year's vacation "for travel and general study." He spent the greater part of the year in fishing for "rare forms of sea life" at Messina Among other interesting specimens he discovered and studied and classified those "pure and beautiful snowflakes of the sea"—the *radiolaria*. He prepared a monograph on this subject and on the

strength of it secured a professorship in zoölogy at the University of Jena

And then came the first of his two tragic romances. He fell in love with his cousin, Anna Sethe, a young woman "of rare gifts of mind and soul." They were married and lived happily—for just two years It was precisely on his thirtieth birthday that his young wife died

For a time his friends feared that he wouldn't survive the blow. "Work alone can save me from going mad." And so he plunged into his work and prepared within a single year a twelve-hundred-page summary of his scientific ideas—the *General Morphology of Organisms* Throughout the writing of this manuscript Haeckel lived like a hermit, working eighteen hours a day and getting about three or four hours' sleep out of the twenty-four.

Haeckel dedicated this book as a living monument to his wife. He named after her one of his favorite *medusae*—a fairy-like jellyfish "whose long, trailing tentacles remind me of her lovely golden hair"

Three years later he married again—this time not out of love but out of a desire for companionship. He moved into a "roomy" cottage which he named the *Villa Medusa* and settled down to a lifelong study of the mystery of life For exercise he took long walks—he was always a good athlete, having established a record in the broad jump—puttered around in his garden, and pounded on his chest with his fists "to make it breathe deeply" as he stood at the open window of his bedroom. Sometimes he resorted to this chest-pounding on his way from his house to the college—to the great amusement of his students

In the lecture-room, however, his students felt nothing but the highest admiration for their teacher who "talked like the devil and sketched like a god" Sitting at a small table, except when he got up to draw a diagram on the blackboard, he delivered his lectures in a voice that was "perfervid, scintillating, assured." He expressed his ideas with deference to few and with apologies

to none. He suffered from no sense of false modesty. One day when a friend asked him, "Who is your favorite author?" he promptly replied, "Ernst Haeckel."

But if his favorite author was Ernst Haeckel, his favorite scientist was Charles Darwin.

IV

It was in 1866 that Haeckel met "the genealogist of the world's greatest family tree." This meeting with Darwin, Haeckel tells us, was one of the supreme moments of his life. "The carriage stopped before Darwin's pleasant ivy-covered and elm-shaded country house. Then, emerging from amidst the creepers which surrounded the shadowy porch, I saw the great scientist advancing towards me—a tall and venerable figure, with the broad shoulders of an atlas supporting a world of thought . . The charming, candid expression of the whole face, the soft, gentle voice, the slow, deliberate speech, the simple and natural train of his ideas, took my whole heart captive during the first hour of our conversation, just as his sublime words had taken my whole mind by storm at the first reading. It was as if some exalted sage of Hellenic antiquity, some Socrates or Aristotle, stood in the flesh before me."

Haeckel became the champion of Darwin in Germany just as Huxley had become his champion in England. ("The heresy of Darwinism," remarked an English clergyman, "has now entered upon an unholy alliance of three H's—Haeckel, Huxley and Hell.") Unlike Darwin, Haeckel announced himself aggressively as a missionary of free thought. "There is no God," he said. "And," added a facetious adversary, "Haeckel is His prophet." He attacked the "fanaticism of religion" with an equally vehement fanaticism of irreligion. He wrote book after book to disprove the divinity of God and to establish the divinity of Nature. And with the appearance of each book a new avalanche of vituperation fell upon the head of the author.

At the turn of the century, when evolution had become somewhat respectable, a visitor at the University of Jena spoke to the janitor about the popularity of Haeckel's courses "Yes," replied the janitor, "but I have seen him stoned down that street there" When he delivered one of his early lectures on Darwinism to a great assembly of naturalists, the audience rose in a body and left him to expound his ideas to an empty room On another occasion when he came as a delegate to a Freethinkers' Convention at Rome, the Pope ordered a "divine fumigation" of the entire city

The name of Haeckel was anathema everywhere—except in the little University of Jena Here he remained undisturbed for fifty years More than once he offered to resign from the university in order that "it may escape the stigma of harboring an infidel" But Dr Seebeck, the head of the governing body, always refused his offer "I don't like your ideas, and that is why I insist upon your remaining here In a little university you have but a little influence. In a bigger university, however, you can do a great deal of harm . Besides, the older you get, the less radical you'll become"

And Haeckel grew older and became *more* radical—and still remained at Jena As time went on and his ideas became popular, he received numerous offers from larger universities at more attractive salaries But he turned them all down. Here at Jena Goethe had written some of his finest lyrics Here Schiller had taught history for ten years. Haeckel loved the traditions of the college. And he loved the atmosphere of the town—*das liebe narrische Nest,* with its meandering cobble-stoned streets, its Gothic towers, its fragrant little gardens and its gossipy houses whose gables, like the faces of beldames in fluted red caps, leaned toward one another "in a perpetual whisper" Above all, he loved the Thuringian Mountains that ringed the little city and kept away from it the noises and the traffic of the outside world. "Here I have everything I want, everything I can use. Why should I think of uprooting my life?"

In this quiet fruit-bowl of a valley nestled under the inverted bowl of the heavens he took his long walks and delivered his lectures and wrote his books and formulated the outlines of a new scientific credo—"the irreligious religion of *Monism*."

V

THE *Monism* of Haeckel is the *Pantheism* of Spinoza translated into the scientific language of the nineteenth century. *Monism* (from the Greek *monos,* which means *single* or *alone*) is the doctrine that the entire universe is a single unit. This doctrine is opposed to the *Dualistic* theory that the universe consists of two parts—the *Creator* of the World and the *Created* World.

The world, according to Haeckel, has not been created by an external God. It is the result of "one great process of evolution operating through an unbroken chain of transformations that are causally connected."

In this causal and unbroken chain of connections all plants and animals form a single genealogical tree from the primordial cell to the modern man.

The soul of man is no different from the soul of the lower animals Both in men and in animals the soul is nothing more than "the totality of the cerebral functions" These living functions of the brain are ended at death, and so it is absurd—declares Haeckel—"to believe in the personal immortality of the soul."

Just as there is no soul distinct from the body of man, so too there is no God distinct from the body of the world God is the sum total of the matter and the energy—the body and the spirit—that compose the inseparable unit of the world's substance.

So much for the theoretical side of Monism Let us now take a brief glance at the practical side. In the evolutionary struggle for existence—asserts Haeckel—the law of competition among

the lower animals gives way to the law of coöperation among men. The human individual can best survive through the application of the social instinct of reciprocal interdependence. The most effective form of government for human society is *Nomocracy*—the rule of justice in accordance with the laws of nature. These laws of nature, as applied to human conduct, require mutual respect for one another's opinions, tolerance in religious matters, and freedom for the individual up to but not beyond the point where his freedom would interfere with the freedom of other individuals

This scientific approach to human ethics brings Haeckel—and he admits it—very close to the religious approach. In summarizing the "rational morality" of his monistic religion he concludes that "man, since he is a gregarious (social) animal, must strive to attain the natural equilibrium between his two different obligations—the behest of egoism and the behest of altruism. The ethical principle of the *Golden Rule* has expressed this double obligation twenty-five hundred years ago in the maxim· *Do unto others as you would that they should do unto you*"

And thus we find in Haeckel the paradox of a man who denies God and accepts Jesus After all, Haeckel was not a *freethinker* but a *free thinker*. Released from the shackles of prejudice he had chosen a new path to the heart of the world's mystery. And he had found there the selfsame truth that had been discovered by the prophets of the old religions. The old prophets had said, "God is love." Haeckel merely paraphrased these words into the scientific dictum, "Nature is friendly toward the noblest aspirations of man."

VI

AT THE AGE OF SIXTY-FIVE he put all his scientific and philosophic thought into a single volume—*The Riddle of the Universe.* It became an immediate best seller and remained so for a quarter

of a century But he derived little joy from his success For in the course of the writing of this book he had entered upon the second of his tragic romances One day in 1898 he received a letter from an unknown young woman "Please forgive this intrusion from a stranger, and be a little patient. I will write as briefly as a woman can . . By accident one of your books, *The Natural History of Creation,* fell into my hands. What a new world rose before me! . . Is it any wonder that I require more after having read your book? . . . Will you reach me your hand, my esteemed Professor, and tell me what to read? . . " Signed, *Franziska von Altenhausen.*

Haeckel sent her a list of books to read After a few more letters they exchanged pictures, and then they exchanged hearts. Haeckel was unhappy at the Villa Medusa. His life had been embittered by the incessant nagging of a feeble-minded daughter and an invalid wife Here was a young woman—she was only thirty—who soothed his "wounded old heart" with the balm of adoration For five years they kept up a clandestine and passionate correspondence. "What an amazing thing"—he wrote—"that a young girl like you and an old man like me should have fallen so desperately in love with each other!" And Franziska wrote back: "Don't call yourself an old man In spirit you are a young god"

They had several secret trysts, in various parts of Germany. "From the depths of my heart," he wrote to her after their first meeting, "I thank you for the two memorable days that brought me the happiness of your personal acquaintance . . . You must surely have perceived from my awkward behavior how completely your kind visit has upset the ordinary composure of my prosaic existence—the radiance of a sweet spring fairy who brings fragrant blossoms to the dungeon of a poor, lonely captive"

After another meeting—"How enchanting was our bridal journey yesterday!"

And Franziska to Haeckel, after still another meeting—"Our

dear days together seemed to me like a beautiful dream too lovely to endure Its memory still enfolds me so magically that it is difficult for me to express in words what moves my heart Only be sure of this—in those few hours you grew far, far dearer to me than ever before "

Age, wrote Haeckel in one of his letters to Franziska, is no guard against folly. Torn between his disloyalty toward his own wife—he deceived her, he said, for her own peace of mind—and his infatuation for Franziska, he entertained for a time the idea of committing suicide. "The important question of self-destruction (the very term is nonsense—it should be called self-deliverance) has occurred to me very often in recent weeks." He gave up this thought in favor of another avenue of escape—a trip to the Indian Ocean. "Franziska, dearest, best beloved wife of my heart—I depart for the tropical seas to escape from you and from myself—two rare and extraordinary souls made for each other—who, separated, must wander lonely through life . . " He traveled to India, Singapore, Buitenzorg, Sumatra, Java—but wherever he went he carried along his sorrow. "Man," he wrote to Franziska from Port Said, "escapes himself nowhere "

And so he returned home and waited—for what? "We must agree never to see each other again," wrote Franziska, "as long as your wife lives " Haeckel gave his consent to this agreement And then they met again—and again.

Ardently they both yearned for the day when his wife would leave them free. But they expressed this yearning only by innuendo. "The poor thing," writes Haeckel, "has been in bed again for the past eight weeks I assure you that I am doubly patient and attentive now." And Franziska, in reply—"You must be very careful of your poor, dear wife. How is her heart? Is there any hope?"

Every day, indeed, the doctors expected his invalid wife's heart to flicker out .

But it was Franziska's heart that gave out. One winter morn-

ing Haeckel received a telegram from Ursula Altenhausen. "My sister Franziska died suddenly last night."

VII

HAECKEL LIVED ON for another sixteen years—tragically alone. And then, on a midsummer night in 1919, he fell mercifully asleep. "The riddle of man's life," he wrote a few days before he died, "remains unanswered But—*impavidi progrediamur,* let us go forward unafraid!"

STEINMETZ

Great Scientific Contributions by Steinmetz

Discovered the law of *hysteresis*, or loss of power, in alternating electric currents.

Formulated method of calculating alternating currents.

INVENTION:

Invented "lightning arrestors" to protect high power transmission lines.

BOOKS, PAMPHLETS AND LECTURES

On Electric Discharges.

On Engineering and Mathematics.

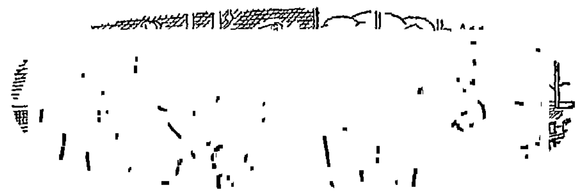
Relativity and Space.

Radiation, Light and Illumination.

Theory and Calculation.

Charles Proteus Steinmetz

1865–1923



HE WAS BORN deformed. The left leg wasn't "just straight" and there was a hump on his back. "But he'll get along all right," the doctor assured his father.

Karl Heinrich stiffened. "Oh yes, he'll get along all right." All the Steinmetzes did. In spite of their handicaps. For generations they had toiled and suffered on the constantly shifting frontiers of Germany and Poland. They had lived by their shrewdness. They had been innkeepers and shopmen, small town bourgeoisie who knew how to bargain and to eke a narrow margin of profit out of life. Never had they asked for quarter. Never fear for the newcomer. "He'll manage somehow."

And within a year little Karl had to manage without his mother. His father, a lithographer for a German railroad, placed him under the care of his grandmother.

In the large room of the house on Tauenzienstrasse in Breslau the frolicsome child played with his *Grossmutter* and learned how far he could exploit her love. She entertained him with folk tales of her native Poland and with biblical stories about the ancient Hebrew cities of splendor and gold.

"We too have miracle cities, have we not, Grossmutter?"

asked the child. "Perhaps when I grow up I can help to build one of them"

With his wooden blocks he constructed the Temple of Solomon and when grandmother wasn't looking, he set a candle inside "to light it up" But the flame fed on the blocks and threatened to grow into a conflagration until his grandmother rushed over and deluged the building in water.

Karl was hurt and mystified So *this* is what happens when you try to give too much light. As he grew older, his mind laid plans to seek for a light that would shine in the temple without reducing it to ashes.

He entered the gymnasium at an age when he was "scarcely beyond his infancy" At five he conjugated Latin verbs At seven he learned Greek and a smattering of Hebrew. At eight he possessed a "respectable knowledge" of algebra and geometry. Upon his completion of ten years of study he was ready to graduate with the highest honors. Nervously he awaited the event.

It was the custom for the graduating class to appear on the platform in full dress and to participate in an oral examination. Karl could not afford to own a formal suit. But he rented one. And then, on the morning before the great occasion there appeared on the bulletin board of the school the following notice:

"Karl August Rudolph Steinmetz, by reason of his exceptional scholarship, is not required to submit to the oral examination"

Slowly he folded his formal suit and put it away. The tears on his cheeks were hot. He understood the reason for his exemption. The crippled body of the student The crippled minds of the teachers. They were ashamed to show him before the public They had singled him out, alone among the students, only to make him the more painfully aware of his loneliness.

Karl Steinmetz never wore a full dress suit again.

II

Shortly after he entered the University of Breslau he gave evidence of a prodigious intellect. His professors were amazed at his "magical juggling" of figures. They nicknamed him *Proteus.*

The ancient little hunchback of the sea. According to the Greek legend, Proteus was no bigger than the human hand. When trapped, he could change himself into a thousand different shapes But if the captor held firm, he would gradually resume his real shape, and whisper into the ear the secrets of the world. For the wrinkled little god possessed all the knowledge that men were searching for. . . . So, too, did this little Proteus of a Steinmetz, said the students with an uneasy smile. They were somewhat afraid of his "uncanny mind."

But Steinmetz craved companionship, and he sought for the society of his more serious fellow students One day a classmate invited him to tea and told him about the plans of the German workers for a new social order—a world free from want, a cooperative commonwealth whose motto, based upon the Golden Rule, would be, *One for all and all for one.* "Will you join us socialists?" asked his classmate

Karl's heart leaped with excitement Here was a young man interested in matters beyond the usual frolics and duels of the average student Of course he would join him and his socialists!

At first his new "crusade" was a pleasant diversion from his studies. For the early socialism of Germany was a peaceful movement to secure, by political means, many of the reforms that we in America have gained within the past ten years. But due to the arrogant stupidity of Bismarck the movement was driven underground. As a result of this suppression the "cause" of socialism gained momentum But the members of the socialist party had won the badge of martyrdom.

The "movement" had now become an exciting adventure for Steinmetz. He wrote letters in invisible ink to fellow agitators

who were detained by the authorities. He undertook to edit the socialist weekly—*The People's Voice*—with its challenging and somewhat absurd motto: "We don't know what the government wants, but we are against it."

Karl Steinmetz had found congenial company at last. He was a full-fledged member of the "Noble Order of the Dispossessed." Gradually his mathematical problems took up less and less of his time as the "larger social problem" began to occupy the foremost place in his mind.

And just now this problem called for an immediate and personal solution. *The People's Voice* was in financial straits. One day the printer and the paper merchant appeared together demanding the immediate payment of a bill that had been overdue for several months. But Karl's sense of humor didn't desert him. He led his two creditors into the rear office of *The People's Voice* and offered to give them in payment a complete file of the weekly's back numbers. "Very interesting historical matter," he explained, "quite unobtainable elsewhere."

Finally a bailiff appeared to attach the furniture. "May I offer you a complete file of our back numbers?" inquired the intrepid editor. "Quite unobtainable elsewhere."

It was a gay life. And it was coming to an end. For he was about to graduate from college—with the highest honors in mathematics, to the great joy of his father. It was rumored that the authorities were planning to publish his senior thesis in the official scientific journal. A brilliant career was ahead.

One evening Steinmetz rounded up his socialist friends and announced that he wanted to give a beer party in celebration of his success. It was a merry company that swarmed into the restaurant. Each man called for a stein of beer. Each man proposed a toast, to which the entire company responded in chorus. As the evening wore on, the voices grew louder and the humor broader. They sang in complete disorder.

And then Steinmetz proposed a final toast. "To my father, whose greatest desire it has been to see me graduate with honors.

To my escape over the Swiss border from the police who, as I have been tipped off, are planning to arrest me as a socialist. To my senior thesis that might have come to a glorious end in publication rather than in a hideaway suitcase. To the world and its irony, let's drink!"

In the dawn he tiptoed into his father's room. The older man stirred in his sleep. "I have had such a pleasant dream, Karl—your future——"

"Yes, father," he murmured. "My future . . . It *was* a pleasant dream, was it not?"

A few hours later he left Germany and his father forever.

III

AT ZURICH he earned a scant income writing articles on astronomy. He attended courses at the Polytechnic Institute, rooming with a fellow student "on the top floor of the last house at the end of the final street at the edge of the town." And here came an important turn in his life. His fellow lodger, Asmussen, told him of a country which he had visited—"a land of magic" where the "social question" did not exist. "If you came to America you could discard your preoccupation with politics and devote yourself exclusively to mathematics. There is a crying need for engineers in America."

A land of opportunity where everyone was given a second chance—even a cripple who was hounded by the German police. Perhaps in the West he might find the light that glowed but didn't scorch. His roommate had spoken of the Goddess of Liberty who held in her uplifted hand the torch that lighted the gateway of the New World.

It mightn't be a bad idea to sail for America. But how was he to raise the money for the passage?

It was his fellow lodger who—involuntarily—found an answer to the question. He had fallen in love with a Swiss girl and he had written about his "blessed romance" to an uncle who lived

in San Francisco and who supplied him with his monthly allowance The answer was a stern command that Asmussen come to America at once. Furthermore, he gave notice to his nephew that he was cutting off his allowance.

The saddened lover fingered his bank roll reflectively. "I'll pay your expenses to New York, Karl, if you come along with me."

Steinmetz hesitated for an instant. "What can you do here, Karl? You can't return to Germany. The only good business in Switzerland is that of a hotel keeper. Have you got a hotel?"

And so it was decided They came by steerage. The steamship, *La Champagne,* docked in the New York harbor on a warm June day. The officials looked over the shipload of prospective Americans They were not at all impressed by the little dwarf of a man who limped up to them. Could he speak English? He didn't understand, didn't answer. Asmussen, who spoke English fluently, interpreted the question "A few——" mumbled Steinmetz sheepishly.

Had he any money? "Nein." Had he any job? "Nein." Undesirable alien! They would ship him home No one asked to see the treatise on higher mathematics that he had along with him—a work that singled him out as one of the few geniuses of his generation To the detention room with him!

But Asmussen stepped in. He showed the officials a bank roll. He asserted that these funds were at the disposal of Steinmetz "I will personally see to it that my friend does not become a public charge."

The authorities yielded. The unprepossessing young cripple limped up the busy streets of New York, with only a few letters of recommendation to electrical firms, a capital of mathematical symbols and a slender luggage of hope. He moved with Asmussen into a tenement in Brooklyn and started immediately to look for a job. He applied to the chief engineer of the Edison Electric Company and received a curt rebuff "There are too many engineers coming to America these days."

He visited the manufacturing establishment of Rudolph Eichemeyer. The secretary, taking him for a tramp, was preparing to shoo him away when Mr Eichemeyer himself strode into the office. The young foreigner made a stumbling attempt to introduce himself Rudolph Eichemeyer looked at him kindly. Here was a fellow German. "Sprechen Sie Deutsch?" Within an hour's conversation he had learned all about Steinmetz. "I too am a political refugee," he remarked. "I fled from Germany in 1848. Come around in a week. There may be a job waiting"

There *was* a job waiting—the position of draughtsman at twelve dollars a week Eichemeyer was a manufacturer of hats. But in his spare moments he experimented with electrical gadgets of his own devising. "Are you interested in electricity?" he asked Steinmetz. "If so, you may study some of the generators I've been tinkering with Clumsy contraptions, I admit—elementary attempts to supply the world with power and light Most of us are still groping blindly in this field We blunder and stumble and snatch here and there at a little electricity, an incandescent lamp, a wire, but mostly we know nothing about the general laws. We do not as yet understand how to control electricity."

And then he took Steinmetz to a window overlooking the busy street. "There is a throne awaiting some man—a seat of untold power over vast cities and industries and millions of men and women—such is the kingdom of light lying in wait for its lawgiver ."

Even for a friendless immigrant who had eluded the police in his native land? That night when work was over there was a flush on the face of a little hunchback as he hitched his way home

IV

WITHIN THREE YEARS Karl Steinmetz had assumed the throne in the kingdom of light. He had joined the American Institute of Electrical Engineers. He had reviewed the notes he had taken

on electrical transformers at the Polytechnic in Switzerland. And he had made a thorough study of Eichemeyer's generators Did the industry need an expert mathematician? The entire realm of mathematics had limped its way to America in that summer month of 1889. The electrical engineers were complaining that they were unable to estimate beforehand the efficiency of any generators which they were planning to build And this inability to foretell the power capacity of an engine under construction was due to *hysteresis*—an (unpredictable) loss of energy. The engineers had noticed that a current passing through a core of iron sets up a magnetic north pole and a magnetic south pole, and that when the current reverses its direction, so also are the poles reversed. This alternating magnetism, the engineers had further noticed, meant a loss of power and efficiency. But nobody knew how to estimate the amount of this loss in advance and therefore nobody knew how to build a machine that would reduce the *hysteresis* to a minimum. It was a hit-or-miss method, and the misses were far more frequent than the hits.

Such was the electrical state of affairs in the 1880's A race of engineers in the wilderness of experimental electricity were looking for a Moses to lead them to the promised land of mathematical certainty But for a long stretch of time no voice spoke to them.

And then at a meeting of the American Institute of Electrical Engineers in January 1892, one of its most obscure members walked to the platform and in halting, broken English read to the assemblage a mathematical paper In this paper he formulated, definitely and for all time, the exact law of *hysteresis*. No need any longer to build a generator blindly Karl Steinmetz had tamed electricity to the service of man.

Now he was no longer a German "alien" but an American pioneer. Accordingly he must adopt an American name *Charles August Rudolph Steinmetz? Charles Rudolph Steinmetz? Charles August Steinmetz?* No—none of these would do—they

were too hyphenated *Charles Steinmetz*? That was better. But still something was wrong. Most Americans, he had noticed, had middle names And then a puckish laugh shook his little frame of five foot three Why not *Proteus* for a middle name? The old nickname of his student days Proteus, the god of a thousand shapes, the guardian of a thousand secrets, the interpreter of the mystery of the tempest and the fire and the sea . . . From that day on, he signed his name *Charles Proteus Steinmetz.*

V

IN THIS SAME YEAR which marked the discovery of the law of *hysteresis* (1892) the Edison General Electric Company of New York merged with a rival company and formed the gigantic trust of the General Electric Works. This new organization bought out the firm of Rudolph Eichemeyer and received, along with its other assets, the services of young Steinmetz. The company moved its general offices to Lynn, Massachusetts, and Steinmetz went to that city together with the rest of the office personnel.

A friend who had known him in New York paid him a visit a month after his removal to Lynn and was amazed to find him in sad straits. His clothes were ragged. He looked pale and thin. He had not paid the rent for his room. Through a clerical oversight his name had been omitted from the payroll. For four weeks he had received no salary and he was too shy to make inquiries. "Perhaps," he told his friend, "they don't think I'm worth a salary as yet Perhaps they feel that I ought to be grateful for the experience I'm getting with the firm."

It was soon made clear to him, however, that he was not expected to work for nothing Indeed, he learned that his financial worries were over for the rest of his life For the executives of the company realized that they had captured a Merlin of the

modern age and they would never let him go. They sealed him in comfort and turned the key The little man blinked in bewilderment as he looked at his new shoes and his new clothes and the platters of tasty meats that were set up before him. He pinched himself to see if he were really awake.

And then, satisfied that this was no dream, he took out his wand and worked another miracle. He had observed that alternating current had gradually begun to replace direct current as the best means of transmitting electricity over great distances But as a result of this replacement a new difficulty had arisen. It was easy enough to calculate the regular flow of direct current according to Ohm's Law But no mathematical law had as yet been discovered to measure the irregular flow of alternating current. Steinmetz now discovered this law. It was a mathematical formula that required three volumes of complicated equations

"This man," declared the chairman of the board of directors, "isn't cut out to be an engineer. He isn't a toolmaker but a lawgiver—a thinker in a class with Newton." From that day on they gave him no orders, made for him no regulations, and classified him for no particular job. "Here is our entire plant. Do anything you want with it. Dream all day, if you wish. We'll pay you for dreaming."

The company moved from Lynn to Schenectady and dressed the city out in a constellation of light. And into this Bagdad on the Mohawk rode the pigmy king in triumph. As the lights streamed from the humming dynamos and a thousand suns danced in the midnight air Steinmetz knew at last that he had come home This was the miracle shrine that had been awaiting him from his childhood days Here in the electric city alive with batteries and wires of power devised largely out of his abstract mathematical formulas he sat hunched at the switch—a modern Jehovah ready to wield his thunderbolts over the cities of men. A Jehovah with a little red beard and a stogy in his mouth. A flibbertigibbet of a celebrity. Newsmen cornered him and photo-

graphed him and made much ado about "selling" him to the public. But still he was timid. He fancied that people were fascinated by his pisturesque personality rather than by any appreciation of his thoughts or his feelings.

Did they know, for example, why he had moved into a big house on Wendell Avenue? And did they realize how lonely he was in the midst of these luxurious surroundings? At first he had taken lodgings with a landlady. But he was ill at ease. He burnt her carpets with his acids, damaged her walls with his gadgets, ruined her disposition with his noises in his home-made laboratory at all hours of the day and the night. And that was why he had built himself a mansion—a hermitage for the housing of all his laboratory needs, a spacious temple of light. But he trembled at the thought of moving into the vast palace—a king without a family, without a friend. The reporters waxed enthusiastic about the splendor of the house and never bothered themselves about the loneliness of the owner.

But he tried to conquer his loneliness. One evening he paid a visit to his laboratory assistant—a young man who had just taken a wife. Timidly he invited the young couple to come and live with him. "In this way, you see, my house can become a home." Soon there might be a family in this house—children of sounder flesh than his own. Some day, perhaps, they would call him godfather . . .

The young couple accepted his invitation and moved into the house on Wendell Avenue. But Steinmetz still remained alone—shrinking from the company of his fellows who were fashioned so differently from himself. Out of his suffering for his own ugliness he had developed a tenderness toward all ugly things. In the conservatory adjoining his house he cultivated a "distorted paradise"—of cacti plants. No delicate flowers for him. No foliage of beauty. But ugly misshapen cacti. He spent thousands of dollars preserving them in a hothouse against the blasts of winter. People shuddered at his taste.

"If you want to make me really happy," he told his acquaint-

ances, "send me alligators." He built a pool for five of them, and decorated it with lilies Accompanying him as he limped through the grounds of his estate was a homely mongrel who would never have gained his master's affection had he been slick and pedigreed. "Send me sick fowl and anemic kittens. I will fatten them" The outcast animals reached him in swarms.

And then came the climax to his collection in the "garden of the horrible and the misfit"—a Gila monster The more curious among the people of Schenectady went to their encyclopedias for an account of this monster "A huge, sluggish lizard . . . Its head equals the size of its body, and its tail equals the size of its head . . . With its two spearlike teeth it holds on to its victim while the saliva oozes from its venomous mouth . . ."

Such was the gentle pet. Steinmetz kept him in a cage and every year placed a dozen eggs by his side. Once a month the creature roused himself from his slumbers in the sun and ate an egg And then he shut his scaly eyelids

Ugly creatures, these. Nobody cared for them, yet somehow they made their way in life Steinmetz closed his eyes whimsically over his cigar.

VI

HE WAS RAISED (in 1901) to the presidency of the American Institute of Electrical Engineers The following year he was given an honorary degree at Harvard University. "I confer this degree upon you," said President Eliot, "as the foremost electrical engineer in the United States and therefore in the world"

When George R. Lunn entered upon his term as the socialist mayor of Schenectady, he appointed his fellow socialist of Breslau president of the Board of Education. Steinmetz was happy at the opportunity to put some of his social theories into practice He increased the number of city playgrounds, he instituted special classes for the mentally slow and for the im-

migrants unfamiliar with the English language, and he introduced glass-enclosed classrooms on the roofs of the school houses for the tubercular children. "Bring light into the lives of people—a light that does not destroy but only heals."

The skeptics wagged their heads over his social activities. How could this engineer of a great monopoly reconcile his capitalistic profession with his socialistic idealism? In answer to this question Steinmetz wrote a book—*America and the New Epoch.* It is precisely through the expansion of capitalism that we shall bring about state socialism, he declared. From the large scale corporation to the corporate state. "Eventually private ownership will give way to government ownership under private management." And all this, through the peaceful use of the ballot.

He was a great believer in economic reform through political means. In 1922 he ran on the socialist ticket for the office of state engineer. His specific platform was the harnessing of water power. "For this in a large measure means the liberation of man." Puffing vigorously at his cigar he terrified all the lovers of beauty with his proposal that the water of the Niagara Falls be channeled into a huge plant for hydroelectrical purposes. What was the esthetic pleasure of a honeymooning couple as compared to the physical welfare of the human race? He estimated that the potential energy of Niagara Falls was six million horsepower. "This would bring to the state about two billions of dollars annually—to be spent on housing, playgrounds and schools." And then as he enumerated these advantages his face softened into a puckish smile. For a compromise suggestion had occurred to him On the six working days of the week the water could be diverted to supply the power for the hydroelectric machinery. But on Sundays the power could be closed down and the water could then be allowed to tumble over the precipice "in all its holiday beauty" His eyes beamed with excitement as the full glory—and the full humor—of the vision dawned upon him. "What a spectacle it would make,

with the water beginning to trickle, slowly at first, then tumbling more and more impetuously until it became the thundering Niagara that we know! Wouldn't that be a display infinitely more impressive than what we have now?" He was defeated at the polls.

But he went on with his utopian dreams. "The progress of the human race," he once remarked, "is merely a matter of intelligent engineering." And then he went on to cite an example in order to clarify his idea. "If the Bering Strait were blown up and widened and deepened, we would be able to divert the whole course of that current to the north of North America. If that current ran above our continent, it would melt all the ice and snow of Canada and Alaska, and there would be no more glaciers in Greenland or icebergs in the Atlantic. . . . It would make all of North America warmer in the winter and milder in the summer It would double the habitable area of the globe It would remake the world."

And on another occasion: "I believe that the engineers of the future will bring about a four-hour working day. Work is a curse. The chief aim of society should be the abolition of it."

As for himself, however, he sought no cessation from his work. His beard was graying even as he grew young with his thoughts of the future The total of cigar stubs that he had thrown away mounted appallingly. And still Steinmetz continued with his experiments.

Now he was studying lightning arrestors—devices to protect electrical machinery from the bolts of an angry sky. Now he was building electric condensers that succeeded in capturing some of the characteristics of these celestial bolts. All around him his associates were clamoring for more power, more light —higher currents to press through the wires—higher voltage!

And now at last Charles Proteus Steinmetz was ready for his final experiment "Come in, gentlemen," he told the group of reporters and of distinguished scientists who had gathered at the door of his laboratory. "I have manufactured lightning!"

Quietly they entered. In the corner of the room they saw a monster generator. Spread out before them was a miniature village with houses and trees and a white-steepled church. "If you please, gentlemen, I will show you the devastating power of electricity."

There was a subdued hum and a glow in the vacuum tubes as they warmed up to discharge their power. And then—a terrific crash. A zigzag flame broke over the village. The trees and the houses and the steeple were enveloped in a whirlpool of smoke.

As the smoke cleared the trees were dust, the houses were a heap of ruins, and the white steeple of the church had entirely disappeared.

Steinmetz looked at his astonished audience with a whimsical smile. "Incalculable is the power of electricity to destroy," he said, "when wielded by a foolish hand . . . But equally incalculable, when wielded by a *wise* hand, is the power of electricity to *build*."

VII

SIDE BY SIDE with the cacti the owner of the Wendell House had planted the grounds with orchards lovely and fragrant. But the shadows threatened all the beauty, all the ugliness. Steinmetz was getting old and wayworn. One autumn morning (October 26, 1923) his adopted son, Joseph Hayden, entered the bedroom of the engineer. He had sensed that Dr Steinmetz had passed a restless night. "I'll bring up the breakfast tray," he suggested. "Better to eat a snack before you try to get up."

"All right. I will lie down again."

A few minutes later Hayden's son came into the room with the breakfast. He drew close to the bed. The little man was sound asleep.

Somewhere in the silent air lurked a voice speaking words

that only a little child in Breslau and a kindly old grandmother would understand. "I am tired building with my blocks, Grossmutter. I will lie down again And when the morning comes, I will make another temple so much better than the one I built today."

MARIE CURIE

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Marie Curie

1867–1934



IN 1903 MADAME CURIE was the most celebrated woman in the world. She had just shared the Nobel Prize in Physics together with Pierre Curie and with Henri Becquerel. Screaming headlines in the newspapers, thousands of letters from autograph seekers, innumerable requests for lectures, messages from "departed spirits" forwarded through the "collaboration" of trance mediums, banquets, honors, titles, reporters, photographers, curiosity hunters—all these had descended upon her in an avalanche of unwelcome hosannas Manufacturers of popular articles solicited her endorsement. A horse breeder asked for her permission to name his favorite horse after her For many years the spotlight of public adulation kept singling her out as the foremost of public characters—save one As she got out of a train to deliver a lecture in Berlin one day, she was pleasantly surprised to find herself alone. The mob had stormed to another part of the platform where Jack Dempsey was getting out of the same train. The world's champion physicist was not quite so important a personage as the world's champion pugilist

Madame Curie thoroughly despised the distinctions and the distractions of glory. She regarded herself as a captive chained

and led unwillingly in a triumphal procession She threw away her caps and her gowns and her titles and her medals as soon as she got them. The only things she kept were the menus from the banquets at which she sat as a martyred guest. "These menus, made of thick, hard cardboard, are so convenient for scribbling down my mathematical calculations."

Speaking of this most modest of celebrated women, the most modest of celebrated men—Albert Einstein—once remarked: "Marie Curie is, among all distinguished people, the only one whom fame has not corrupted."

II

MANYA SKLODOVSKA, known today as Marie Curie, came of a Polish stock of noble and honest peasants. Her parents had risen above the soil into the rarefied atmosphere of higher education. Her father was a professor of physics at the Warsaw High School, and her mother was an accomplished pianist. Manya—a pet name for Marya—inherited her father's brains and her mother's hands She showed an early aptitude for experimental science. But her parents didn't allow any of their five children to do much studying. There was a taint of consumption in the family. Whenever Manya became absorbed in her books, Madame Sklodovska would put her hand gently on the child's head "Go and play in the garden, Manyusha. It's so beautiful outside."

Every evening at their prayers the children added a final sentence. "And please, God, restore our mother's health."

But it pleased God to take Madame Sklodovska from her children—there were four now, one of them had died of typhus. Manya was only ten when she was left motherless.

It was a sad and impoverished family that gathered around the table after Madame Sklodovska's departure. Manya's father had lost his position in the high school because of his aspiration

for the freedom of Poland from the tyranny of the Russian czar. He had opened a boarding school, but with indifferent success. The maintenance of his family seemed a task beyond his feeble powers. Four healthy mouths to be fed, four growing bodies to be clothed, and four active minds to be educated. Desperately he invested his inadequate savings in the hope that the numerator of his possessions might grow equal to the denominator of his needs. But he lost his entire investment He had nothing to look forward to

Nothing but four children with superior brains and superior grit. All these children were destined to rise from poverty to achievement. For the strength of the Polish soil was within them.

And the aspiration of the Polish heart The aspiration of a free soul in a chained body. The Sklodovski children, like their father, were rebels. They fought against adversity and they fought against tyranny. Every morning when Manya walked to school, she passed by a statue dedicated "to the Poles faithful to their Sovereign"—that is, to the Poles who were faithless to their country. Manya always made it a point to spit upon this statue. If, by inadvertence, she failed to perform this act of disrespect, she turned back to make good her failure—even at the risk of coming late to school

This gallant little rebel expressed her contempt for oppression not only in the absence but also in the presence of her oppressors. Among her teachers who represented the alien governing power over Poland was Mademoiselle Mayer, the German superintendent of studies This "slithering spy with her muffled slippers" was a little bit of a woman with a prodigious capacity for hate. She made life unbearable for her Polish pupils—especially for "that Sklodovska girl" who dared to answer her lashing tongue with a scornful smile But Manya was not always content with a mere smile of silent scorn. One day "the spy" attempted, with a none too gentle hand, to straighten Manya's unruly Polish curls into a conventional Gretchen braid. In vain. Man-

ya's hair, like her spirit, refused to yield to the tyrant's touch. Exasperated at "the capricious head and the contemptuous eyes" of her Polish pupil, Mayer finally shouted:

"Stop staring at me like that! I forbid you to look down upon me!"

Whereupon Manya, who was a head taller than Mayer, replied sweetly: "I can't very well do anything else, Mademoiselle."

Yet in spite of her rebellion Manya carried off the gold medal at the completion of her high school course (in 1883). It had become a habit with the Sklodovskis to win this highest award for scholarship. There were by this time three gold medals in the family.

And now, said her father, enough of study for the present. Let her go to the country for a year and build up her body. "This pretty child must not, like her mother, fall a victim to consumption."

Manya gladly consented to her father's suggestion For she loved her play as she loved her work. She yielded herself "body and soul" to the luxury of idleness. "My dear little devil," she wrote to her school friend, Kazia, "I can hardly believe there is any such thing in existence as geometry or algebra." She spent her summer days roaming in the woods, swinging, swimming, fishing, playing battledore and shuttlecock, or just lying on the grass and reading—"no serious books, I assure you, but only absurd and harmless little novels." And she spent her winter nights and days—dancing. Those Polish dances! Starting at sunset and continuing in relays as the revelers, with the fiddlers at their head, journeyed from farmhouse to farmhouse, dancing away the night, beyond the dawn, beyond the sunset of the following day and into the sunrise of the next. And the most tireless as well as the most graceful dancer of them all was Manya Sklodovska. "All the young men from Cracow asked me to dance with them . . . very handsome boys . . . you can't imagine how delightful it was . . . It was eight o'clock of the

(second) morning when we danced the last dance—a white mazurka." And then she had to throw away her slippers of russet leather, for "their soles had ceased to exist . . ."

III

AFTER HER YEAR'S VACATION she returned to Warsaw and to an uncertain future. Her older sister, Bronya, wanted to study at the Sorbonne, in Paris. So too did Manya. But there weren't enough funds in the family to finance even one of them, let alone both, through the university. An insoluble problem, it seemed, yet Manya found the solution. "I will get a job as governess and help you through college. Then you will get a doctor's degree and help me in return."

It seemed an audacious plan, but it worked. Manya became a "teaching servant" in the family of Madame B——, a stupid, vulgar and intolerant woman who economized on oil for the lamps and who gambled away her money on cards. "My existence," wrote the young governess, "has become unbearable . . . I shouldn't like my worst enemy to live in such a hell." Fortunately she was able to exchange this for a better position in a somewhat more intelligent home. Her new "mistress," Madame Z——, was fully as intolerant though not quite so vulgar as her former employer. "Madame Z—— has a bad temper, but she is not at all a bad woman . . . Some of her children—she has a whole collection of them—are really delightful."

Especially Casimir, the eldest son. A university student at Warsaw, he had come home for vacation and had promptly fallen in love with the pretty little Sklodovska who not only could talk like a scholar but who could dance like a goddess. And Manya, affectionate and sensitive and lonely, returned his love.

But there was to be no marriage between them. Casimir's mother refused to accept a governess into her family—forgetting that she herself had been a governess before her marriage. For a

time Manya played with the idea of suicide. "I have buried all my plans, sealed and forgotten them," she wrote to one of her cousins. "The walls are too strong for the heads that try to break them down . . . I mean to say farewell to this contemptible world. The loss will be small, and regret for me will be short . . ."

She got over her despondency, however The Sklodovskis were not the suicide type She returned to her teaching and her scrimping and continued to support Bronya at the Sorbonne. The latter, thanks to Manya's assistance and to an inborn talent for enduring the pangs of hunger, succeeded in starving and studying her way through to a medical degree She married Casimir Dluski, a fellow student in medicine, and was now ready to conclude her half of the bargain with Manya. The young governess was able at last to see the fulfilment of her most ardent dream. The Sorbonne!

IV

MARIE SKLODOVSKA—she had registered her first name in the French manner—student in the Faculty of Science—age, 23—hair, ashen-blonde—personality, taciturn—ability, exceptional. She always sat in the front row at the lectures; but the moment the lectures were over, she glided out like a shadow. Her sad experience with the social conventions had planted within her an aversion for all sorts of society. "Fine hair, fine eyes, fine figure of a girl," remarked the boys at the university. "But the trouble is, she won't talk to anybody."

For four years "she led the life of a monk." Refusing to be a burden to her sister, she lived alone. She had hired, at fifteen francs (about $3) a month, a sixth-floor attic in the Latin Quarter. The only light came in through a loophole in the slanted ceiling. The room had no heat and no water. In this prison of a room she lived upon a general diet of bread and butter and tea—with the luxury of an egg or a fruit thrown in on the rarest of occasions. In the winter she put a handful of

coal into a toy stove and sat doing her equations with numb fingers long after the fire had gone out. Then, at about two in the morning, she crept into an iron bed with insufficient covers.

One day a classmate reported to the Dluskis that Manya had fainted in front of her. Casimir hurried to her attic where he found her at work on her next day's lessons.

"What did you eat today?"

Manya looked up with an evasive smile. "Today? I don't remember."

"Come, come, Manya No evasions What did you eat today?"

"Oh, cherries . . . and everything"

Finally he got the confession out of her. For the past twenty-four hours she had lived on a handful of radishes and half a pound of cherries Much against her will he carried her off to his house where Bronya fed her and rested her up for a few days And then, in spite of all the protestations of the Dluskis, she returned to her attic and her hunger and her books.

She lived in the world of her books. And of her lectures. In spite of her poverty and her hunger, she felt like an intrepid explorer adventuring over an unfamiliar sea. And she meant to make every mile of it familiar as she kept journeying from day to day to an ever expanding horizon. Physics, chemistry, mathematics, poetry, music, astronomy—the entire circle of the earth and the heavens had come within the range of her intellectual domain But above all she was interested in her experiments. She regarded the laboratory as a delicate musical instrument upon the keys of which, with the skillful fingers inherited from her mother, she kept constantly seeking to combine old notes into new tunes

Her professors, delighted with her imagination and her enthusiasm and her skill, kept encouraging her to undertake new researches And one day, emboldened by her success, she declared that she would carry her special researches not into one but into two fields She would try for a double master's degree—in physics and in mathematics

And she succeeded. She passed first in the master's examination in physics (1893), and second in the master's examination in mathematics (1894).

A brief vacation in Poland, and then back to Paris—and to her second love affair. After her first unfortunate plunge into the whirlpool of romantic passion, she had vowed to dedicate the rest of her life to a single passion for science. She had no use for men.

And at that time there lived in Paris a young man, Pierre Curie, who had no use for women. He, too, had devoted his life to the exclusive pursuit of science.

One day they met at the apartment of M Kovalski, a Polish professor of physics who was visiting Paris. "When I came in," wrote Marie, "Pierre Curie was standing in the window recess near a door leading to the balcony. He seemed very young to me, although he was then aged thirty-five I was struck by the frank expression of his eyes and by a slight appearance of carelessness in his tall figure. I liked his slow, reflective words, his simplicity and his smile, at once grave and youthful. We started to converse on matters of science . . . and before we knew it we were friends."

Pierre Curie, the son of a French physician, had become a bachelor of science at sixteen and a master of physics at eighteen. When he met Marie, he was head of the laboratory at the Parisian School of Chemistry and Physics. His achievements had already placed him in the front rank of French scientists He had formulated the principle of symmetry in the structure of crystals. Together with his brother Jacques he had discovered the important phenomenon of piezoelectricity—that is, the generation of electricity by means of pressure. He had invented a new apparatus for the precise measurement of minute quantities of electricity. And he had constructed an ultra-sensitive instrument —known as the *Curie Scale*—for checking the results of scientific experiments.

For all these achievements he was receiving from the French

State the miserable salary of three hundred francs (about $60) a month.

On this inadequate salary he timidly proposed marriage to Mademoiselle Sklodovska; and Mademoiselle Sklodovska—with equal timidity, it must be confessed—accepted.

Yet the marriage turned out to be not only a partnership of genius but also a comradeship of love After an unconventional wedding without a lawyer or a priest—both of them were free-thinkers—they enjoyed an equally unconventional honeymoon bicycling over the country roads of the Ile-de-France Then they returned to Paris and settled down to the work which was to bring glory to the name of Curie and healing to an afflicted world.

V

MARIE TOOK CARE of the house, gave birth to a baby girl, then to another, studied for her doctorate in physics, won a fellowship with a monograph on the magnetization of tempered steel, and spent all the rest of her time collaborating with her husband in his experiments The doctors warned her of a tubercular lesion in the left lung—the Sklodovski family taint. They advised her to go to a sanatorium. But Marie wouldn't think of it. She was too deeply absorbed in her laboratory work She and Pierre had become interested in the experiments of Henri Becquerel. This eminent French physicist, while examining the salts of a "rare metal," uranium, had discovered that these salts emitted a ray which apparently could penetrate opaque objects. A compound of uranium, which he had placed on a photographic plate surrounded by black paper, had made an impression on the plate *through* the paper. This, so far as we know, was the first human observation of the penetrating quality of certain strange types of rays.

What was the nature of this mysterious property of penetration through opaque objects? And whence came this peculiar

energy? These questions exercised a strong fascination upon the minds of Marie and Pierre Curie. Here was a subject for original study, a thesis worthy of a doctor's degree at the Sorbonne!

Such was the enthusiastic yet humble beginning of the research that led to the discovery of radium. Marie had started out on the road to an ordinary doctorate. She found at the end of the road—the Nobel Prize in Physics.

But the traveling of the road was long and arduous and heart-breaking. It took a man and a woman of supreme imagination and of supreme courage to go on unfalteringly to the end.

Almost from the first they encountered insurmountable difficulties—and they surmounted them. The laboratory that the director of the School of Physics gave them for their experiments was an old and dilapidated woodshed. In this damp and cold shanty of a workroom—in the winter the temperature of the laboratory averaged about 44°—the consumptive little pioneer and her husband plunged resolutely into the unknown. With their pitiably inadequate apparatus they examined the nature of uranium and found that the mysterious radiation of this metal was an *atomic* property—a scientific discovery which years later (in 1945) was to lead to the invention of the atomic bomb. And then the light of a great thought fell upon Marie. Perhaps uranium was not the only chemical element that possessed the power of irradiation. Perhaps there were other substances with even greater powers of "penetrating the impenetrable." She must try and see . . .

And so another and even more daring venture into uncharted seas Madame Curie took up all the known chemical bodies and submitted them to a rigorous test. And before long she discovered what she was after. Uranium was *not* the only element with that mysterious power of irradiation. Another element, thorium, possessed the same power in about the same degree. To this power Madame Curie now gave the name of *radioactivity*—the active and *penetrating* property of certain types of rays.

But this was only the beginning of her research. In her exami-

nation of some of the compounds of uranium and of thorium she had found a *far more powerful* radioactivity than could have been expected from the quantity of uranium or of thorium contained in the compounds Whence came this extra power of radiation? To this question there was but a single answer—the compounds must have contained a chemical element whose radioactivity was far greater than that of uranium or of thorium But Madame Curie had already examined all the *known* chemical elements and had found no such powerful radioactivity in any of them Therefore, she concluded, there must be a hitherto unknown element that possessed this power *A new element.*

With beating heart she went to see her sister one day "You know, Bronya, the radiation that I couldn't explain comes from a new chemical element. The element is there and I've got to find it!"

And now she set about the business of finding this new substance It was in the pitchblende ore—an oxid of uranium—that she had noticed the tremendous power of radiation. Somewhere in this ore lurked the mysterious source of this power. The radioactive part of pitchblende, thought Madame Curie, must represent an exceedingly small fraction of the ore in its crude state, since no scientist before her had ever been able to discover it. Perhaps this new element would be found to consist of not more than one per cent of the pitchblende, concluded the cautious young Polish scientist. How great would have been her astonishment had she then realized that the new element she was trying to isolate consisted of only *one ten-thousandth of one per cent,* or *a millionth part,* of the pitchblende ore!

Marie and Pierre—they had always worked together on these researches—were now certain that they were on the threshold of a new discovery But how to get beyond the threshold? Pitchblende, out of which they hoped to isolate their new element, was an expensive ore It was mined in Bohemia for the extraction of the uranium salts that were used in the manufacture of glass. A ton of pitchblende, with the uranium that it contained, was

far beyond the Curie pocketbook. It was a problem that seemed beyond solution.

But they solved it. If the new element, they reasoned, existed in the pitchblende and was yet different from uranium, then it could be isolated from the *residue* of the pitchblende *after* the uranium had been extracted. This residue was regarded as almost worthless The Curies could have considerable quantities of it for little more than the cost of transportation.

And so these "queer" scientists, to everybody's amusement, began to order tons upon tons of "rubbish" to be shipped to their woodshed. And when this "rubbish" arrived they began to throw it, shovel by shovel, into an old cast-iron stove with a rusty pipe. For four years they kept at it like a couple of stokers in the hold of a ship—shoveling, gasping, coughing at the noxious fumes, forgetful of their discomfort and intent upon a single thought—to lure the secret of the new element out of the blazing metal.

And finally they lured out the secret—two secrets. For instead of one they found two new elements—a substance which they named *polonium* after Marie's native country, and another substance which they called *radium*.

The nature of polonium was amazing enough. Its radioactivity was ever so much more powerful than that of uranium. But the nature of radium was the eighth great wonder of the world. For its power of radiation was found to exceed that of uranium by *one and a half million per cent.*

VI

It was customary for the recipients of the Nobel Prize to call for it in person at Stockholm But the Curies were unable to make the journey. They were too ill. Quietly, modestly, humbly they went on with their work—and with their privations They spent all their money on their further experiments and remained gloriously forgetful of their personal interests. When the therapeutic value of radium was established—it had been found

effective, among other things, in the treatment of cancer—their friends urged upon them the necessity of patenting the process of extracting radium To do so would have meant considerable wealth to the Curies, since radium was valued at $150,000 a gram But they refused to derive any income from their discovery "Radium is an instrument of mercy and it belongs to the world"

They refused not only profits but honors as well All they asked of the world was to give them a good workroom for their experiments When the dean of the Sorbonne wrote to Pierre that the Minister had proposed his name for the Legion of Honor, Pierre—seconded by Marie—replied as follows. "Please be so kind as to thank the Minister and to inform him that I do not feel the slightest need of being decorated, but that I am in the greatest need of a laboratory."

On one occasion, however, Pierre did allow his name to be presented for distinction. His scientific colleagues had insisted that he become a candidate for the Academy of Science—not so much for the sake of the honor itself as for the opportunity it would bring him to secure a professorship at the Sorbonne *And a laboratory*

Reluctantly he started out upon his round of visits to the members of the Academy It was the regular custom for every candidate to make these calls and to "drum up" his own qualifications for the honor. Here is how one of the Parisian journalists describes Pierre Curie's "campaign" for the Academy "To climb stairs, ring, have himself announced, explain why he had come—all this sordidness filled him with shame in spite of himself But what was even worse, he had to set forth his distinctions, declare the good opinion he had of himself and boast of his knowledge and of his achievements—ordeals which seemed to him beyond human endurance Consequently he extolled his opponent sincerely and at length, saying that M Amagat was much better qualified than he, Curie, to enter the Academy . . ."

The Academy elected M Amagat

Pierre Curie was highly successful in his efforts to escape from fame. So, too, was Marie. Her simple disguise for avoiding recognition was to remain undisguised. Nobody at first sight would have suspected that the young peasant woman in her unassuming black dress was the celebrated winner of the Nobel Prize. One day an American reporter, hot on the trail of the Curies, had heard that they were spending their vacation in Le Pouldu, a fishing village of Brittany. Arriving at the village, he inquired his way to the Curie cottage He found a rather unassuming young woman sitting barefoot on the doorstep.

"Are you the housekeeper in this place?"

"Yes."

"Is the lady inside?"

"No, she is out."

"Do you expect her in soon?"

"I don't think so."

"Could you tell me something intimate about her?" asked the reporter as he sat down on the doorstep.

"Nothing," replied Marie, "except one message that Madame Curie told me to convey to reporters: *Be less inquisitive about people, and more inquisitive about ideas.*"

VII

FINALLY Pierre Curie was accepted into the society of his inferior —and therefore envious—fellow scientists "I find myself in the Academy without having desired to be there and without the Academy's desire to have me."

After several meetings with his colleagues he wrote to a friend. "I have not yet discovered what is the purpose of the Academy."

Yet it served one good purpose—it enabled Pierre to get an appointment to the Sorbonne. Together with the appointment came the offer of a well equipped laboratory. The lifelong dream of the Curies was about to be fulfilled.

And then, one rainy morning in April, 1906, Pierre left his home to visit his publisher. A few hours later they brought his lifeless body to Marie He had slipped on the wet pavement, and a heavy truck had run over him

Marie's happiness was at an end But not her work She accepted an offer to assume her husband's professorship at the Sorbonne—it was the first time in French history that a position in higher education had been granted to a woman She went on with her experiments in Pierre's new laboratory, of which she had now become the director She took care of her children. She prepared papers on her researches And every night, before going to bed, she wrote an intimate account of her thoughts to her dear departed It was as if she were writing a letter to someone still alive

"I am offered the post of successor to you, my Pierre; your course and the direction of your laboratory I have accepted. I don't know whether this is good or bad . . ."

"My Pierre, I think of you without end. My head is bursting with it and my reason is troubled I can not understand that I am to live henceforth without you . ."

"My little Pierre, I want to tell you that the laburnum is in flower, the wistaria, the hawthorn and the iris are beginning—you would have loved all that . ."

"I no longer love the sun or the flowers The sight of them makes me suffer I feel better on dark days like the day of your death, and if I have not learned to hate fine weather it is because my children have need of it . . ."

It was for her children's sake that she went on—and for humanity's sake A little more work to lessen the sufferings of her fellows. In 1911, when she received the Nobel Prize for the second time, she accepted it merely as another opportunity to widen the scope of her researches The healing power of radium—this now was the paramount quest of her life When the World War of 1914 broke out, she organized and personally supervised a number of X-ray outfits for the treatment of wounded soldiers.

Throughout the length and breadth of the country she journeyed —an angel of mercy with a beautiful white face and with pained and acid-bitten fingers.

In spite of her fatigue and her pain and her sorrow she was always ready with her encouraging smile and her gentle word. "Will it hurt?" asked the frightened soldiers when they saw the formidable X-ray apparatus. "Not at all," was her invariable reply. "It's just like taking a photograph."

The war was over. Travels, distinctions, interviews, medals, lectures, banquets—and labor and sorrow. And, to the very end, an "incurable inaptitude" for material success "Dreamers," she said, "do not deserve wealth, because they do not desire it"

She was now approaching the end of her dream. "Ah, how tired I am!" she murmured as she came home from her laboratory one day. The next morning she couldn't rise from her bed. The doctors who came to examine her were unable to diagnose her disease. It resembled influenza, tuberculosis, pernicious anemia—yet it was none of these. Not until after her death did they discover the real nature of her illness It was "radium poisoning"—the gradual decay of the vital organs through a lifetime of excessive radiation.

Madame Curie had died a martyr to her work.

BANTING

Great Scientific Contribution by Banting

Discovered the value of insulin in the treatment of diabetes.	Wrote various papers on this discovery.

Frederick Grant Banting

1891–1941



THE shells burst under the impulse of a heavy bombardment The Canadian regulars were giving the Boche as much as they took. Men stared grotesquely from the mud at Cambrai —wanting eyes, wanting limbs, wanting souls. Bodies lay promiscuously with alien bodies in the last embrace of death, crushed and twisted beyond recognition . . .

The blood trickled in a little stream from the lips of young Fred Banting. He was breathing hard, dreaming fitfully In his delirium he imagined himself bending over the hoe on his father's farm in Alliston, Ontario. The sun was hot, frying his feet in the soil; the perspiration streamed over his face. There, now! He paused to wipe his lips with the back of his arm. Gradually his eyes cleared. This was no farm. This was a hospital. He was stiff on his back Around him lay boys and men in pain

"Hello, son We've got to operate." It was the army doctor's voice

Banting turned over on his side. "You're not going to take my arm away from me Not if I can help it, sir!"

They might as well tell him the truth He was serving with

the army medical corps of the 44th battalion. These boys knew how to take it.

"We must amputate, my boy. Otherwise we may not be able to save your life."

"Oh no, not my arm. I'll risk the chance of dying"

A stubborn, fighting fool. Those were the words that described him best. Back in 1915 he had left his medical course at the University of Toronto and had rushed off to enlist as a private But they had ordered him back to his education. He would be more serviceable to his country with his medical degree In 1916 he had joined up again as a doctor. You couldn't argue with these farm lads. They were not used to being answered back when they did their thinking in the fields. They stood on their rights as tenaciously as they rode their plows

"You see, Doctor, I'm a surgeon myself and I need all the limbs God gave me for the service."

The doctor shrugged his shoulders and moved on to other beds, to other hospitals filled with ruined daring men.

Fred Banting "risked his chance"—and lived

II

HE RETURNED HOME from the war as quietly as he had left. He entered the Toronto Children's Hospital as resident surgeon. It was fun patching up sick bodies, giving human beings another chance at life. In Flanders he had seen the work of a mighty hand of destruction—inflicting wounds, but never healing them. "It is like the ingenious technique of a Great Surgeon gone mad."

But, after all, Fred Banting was a physician and not a philosopher. He couldn't afford the time to bother about the problems of the Higher Operating Room. He was far too busy with his own problems And so he merely shrugged his shoulders and put together the bits of broken bones and tied the muscles and straightened out the legs and the arms as best he could.

And then he decided to set up for himself. He moved to London, Ontario, hung out his shingle, and waited Within the first thirty days only one patient rang the bell. Banting's income for the month amounted to exactly four dollars "Seems I'm not going to be successful," he smiled grimly. "But at any rate I'm fool enough to be stubborn."

Whatever happened, he would remain stubborn until the day he died

III

THE WESTERN ONTARIO MEDICAL SCHOOL accepted his services as "part time" lecturer in pharmacology. It was a field of which he had but a limited knowledge. In a literal sense he regarded himself as a student rather than as a teacher. One day he was called upon to prepare a lecture on diabetes All over the world there were millions of diabetics who "tried in vain to live by starving" For diabetes was listed as "one of the fatal diseases—remedy unknown." Banting secured the literature on the subject. He read a number of articles, prepared his notes and turned in for the night But he was unable to rest Wave after wave of drowsiness swept over him, only to recede before the ever recurring question: "Why is it that some bodies, unlike all others, are unable to burn the sugar content in their blood and to transform it into fuel?" It was due, of course, to a defect in their pancreas—that elongated gland which secreted the fermentive juices and which digested the food into bodily energy. But what caused this defect? Take the case of Joe Gilchrist, for example. He was one of the millions starving to death as a result of this mysterious disease Joe Gilchrist was his friend, and a doctor like himself. They had played marbles and wrestled and attended medical school together And now he was slowly dying, helpless, feeling the acetone odor on his breath . . .

"Oh well, there's no help for it, I suppose." And yet . . .

"Scattered on the healthy pancreas are dark spots like little islands" They must be there for a precise reason. Yes, but precisely for *what* reason? Just what was the nature of these pancreatic spots? Again and again the doctors had tried to isolate and to analyze them—but in vain. They had noticed only one definite fact—that the "island spots" of a patient who had died from diabetes were found to have shriveled up to a fraction of their normal size, while those of a patient who had died from other causes were found to have retained their original size Such was the fact As to the reason for this fact, nobody could explain it.

Banting tossed and turned that night, as the problem tantalized him. He was stubborn, terribly stubborn. Those mysterious islands, he felt, contained the solution to the problem of diabetes. And he meant to find this solution.

Suddenly an idea set his brain humming For a few moments he attempted to "spark the gap" between the idea and the delicious wave of drowsiness that was descending upon him. And then he drifted off to sleep.

The following morning he arrived at the office of his superior. "Professor Macleod," he said, "I would like ten dogs and an assistant."

The shrewd old professor looked up from his desk "Are you bent on a surgical experiment? I think we can grant your request."

"It has nothing to do with surgery, sir. I've a hunch I can reduce the fatality of diabetes."

Professor Macleod laughed good-naturedly "Every year at the spring fever season some young doctor comes to me with a cure for diabetes."

"I believe I can find a way to check it," persisted Banting. "At least I want to try I would like to conduct experiments on the pancreas."

"The world's greatest physiologists have been experimenting for years on the pancreas. And what is the sum total of their

achievements? They've concocted a starvation diet to torture the victim slowly to death"

"I'm stubborn, Doctor Macleod"

"Have you had the necessary training to conduct experiments in physiology? To speak bluntly, what do you know about diabetic research?"

"Practically nothing, sir. That is why I shall need a specialist to assist me"

"Very well, Banting, you may go ahead."

IV

WHEN BANTING'S FRIENDS and associates heard of his plans they begged him not to abandon his surgical opportunities for a fantastic experiment. At first he listened to them He returned to his classroom in London, Ontario—for one winter. At the approach of spring he stood in a stuffy little alcove at the Medical Building in Toronto—"a self-appointed researcher, untitled, unpaid" He had taken down his shingle, disposed of his surgical instruments, sold his furniture For he knew that his research was not to be the matter of a few weeks. His equipment was worse than inadequate—it was simply nonexistent. His only laboratory was a bench. And his training was no better than his equipment. Never in his life had he undertaken an original experiment.

Nevertheless it was with high hopes that he faced his assistant—Charles Herbert Best—a medical student barely out of his teens This youngster had shown aptitude in chemistry. He would know how to analyze the sugar content in the blood and the urine And Banting himself would do all the necessary surgical work on the dogs.

Enthusiastically the two young men set to work. Fred Banting had read in a medical journal that if you tie off a pancreas duct, the digestive juice cells "shrivel up and die." This gave

him an idea. He would get the digestive juices of the pancreas out of the way and he would thus isolate and study the mysterious "insular spots" which apparently contained the key to the solution of diabetes. "I have a theory, Charlie, that the island cells supply the fuel which burns up the excess of sugar in the healthy body. When this fuel fails, the sugar multiplies and the body becomes diabetic." His logic seemed to him infallible. "Our job, therefore, is to tie off the pancreatic ducts of our dogs, to wait several weeks for the degeneration of the juices, and then to remove and to analyze the residue—or the *soup*—of the island spots."

They started experimenting on their dogs. From ten the number had risen to ninety-one. But still no results And then, when they were experimenting on their ninety-second dog, a miracle happened. The dog, whose pancreas they had removed, lay dying of diabetes. A shot of the "island" extract, and the sugar in his blood began to decrease. A few hours later the dog was on his feet, barking and wagging his tail.

Banting was jubilant. He had discovered the elixir of life for diabetics. He had been right in his theory It *was* the extract from the pancreatic "islands" that burned up the poison of excessive sugar in the body. He called this extract *isletin*—which means *island chemical.*

Their experiments were at an end, thought the two young scientists. But they were mistaken. Their miracle proved to be short-lived. Within twenty days the dog was dead of excessive sugar.

What had happened? They hadn't given the dog enough *isletin*. They hadn't been able to *secure* enough This "island extract" was as unattainable in large quantities as the rarest of minerals "We've been experimenting with an elixir of our dreams"

But Banting was still hopeful of ultimate success. One day as he sat in his laboratory his thoughts went back to his father's farm in Ontario. A hard, patient, stubborn life—this constant

succession of sowing and weeding and harvesting and looking after the cattle . . .

That was it—the cattle! He knew now where he would get his isletin in sufficient quantities to prolong the life of diabetics. He would extract the necessary juices from the unborn calves. The pancreas of an animal in its embryonic stage consisted almost entirely of "island spots." The other digestive juice cells had not as yet developed beyond the rudimentary stage. Here was a great gift to humanity—in the bodies of unborn cattle.

And of *slaughtered* cattle. The pancreatic glands of the animals killed in the shambles had been thrown away as so much rubbish Now this "rubbish" would become an important factor in the saving of life, thought Banting.

And he was right. With the help of the isletin extracted from the unborn and the slaughtered cattle he succeeded in keeping diabetic dogs alive for an indefinite period Banting had discovered a positive check if not a complete cure for diabetes in animals. There remained but a single—and fateful—question: Would isletin check diabetes in human beings?

One day, as he was walking in the street, Banting came across his old classmate, Joe Gilchrist The poor fellow was rapidly "wasting away in streams of sugar" He was emaciated and pallid and hopeless, for he had reached the last stages of the disease.

Banting looked at his friend. "Hello, Joe."

The answer came in a flat, dispirited voice "Hello, Fred."

"I'd like you to come over to my laboratory, Joe I've been busy with some experiments that will interest you" Fred Banting's feelings, however, did not reflect the confidence of his voice as he led Joe Gilchrist to the laboratory. He gave his friend an injection of glucose, and then followed it with a shot of isletin "Let us see now whether the extract will burn up the glucose."

Two hours passed slowly. Gilchrist breathed into the Douglas "test bag." Banting's assistant tested the sick man's breath and

looked quietly at Banting. And Banting knew Best's message. There was no sign of change in Joe He wasn't burning the sugar they had fed him. His breath was heavy and it came in gasps. Banting could not bear to look into his friend's eyes. He rose, gave Best some instructions and left the laboratory. He boarded a train and sped north to Ontario. Here he would spend a few days with his folks and bury his mind in the stillness of the farm. But the click of the wheels over the rails pounded into his consciousness with terrible force The ticking away of the moments of a man dying from too much sugar . . .

The telephone rang in the Banting farmhouse. It was Joe Gilchrist at the other end. He was talking rapidly, excitedly, to Banting. There was a cheerful lift to his voice "Right after you left yesterday I started to breathe easily My head cleared. My appetite returned. Today, to be sure, my legs are dragging again I'm tired, but I'm not worried I'm coming back for another shot of that extract . . . The elixir of life . . ."

V

WHEN PROFESSOR MACLEOD heard of Banting's success he immediately gave up all his other duties and took personal charge of the experiments. He changed the name *isletin* to its Latinized equivalent, *insulin*. Like wildfire the news spread that a check for diabetes had at last been found.

Professor Macleod came before the Association of American Physicians and read an official report of the experiments that had been conducted in "my medical laboratories." At the conclusion of the report a voice from the audience called out: "We move that the Association tender to Dr Macleod and his assistants a rising vote expressing its appreciation of his achievement."

Fred Banting was not a bit concerned over this misplaced honor. But he was very much concerned over the condition of his patients. Crowds of them were being brought into Toronto

begging for insulin to save their life. But there was not yet enough to go around. Nor was the method of its injection as yet perfected. Joe Gilchrist was still dying. Banting pleaded for money and more money to carry on with his experiments.

He now did most of his work in the diabetic ward of the Christie Street Hospital for Returned Soldiers. Here he walked from bed to bed and injected the precious extract into the veins of those who were most hopelessly sick The patients suffered no illusions They knew they were taking terrible risks, for insulin was a two-edged sword. In large doses it lowered the sugar content of the blood to such a degree that the patient suffered a violent shock, fell into convulsions and died. In order to avoid this shock it was necessary to balance the lowering of the sugar with an injection of glucose. But as yet the adjustment of this delicate balance was a matter of trial and error

The soldiers, however, were not afraid Expecting death in any case, they were willing to offer themselves as the objects of his experiments. "There's always the chance that this time it may work"

Joe Gilchrist was chief of the "rabbits" for Banting's experiments He, too, was now a patient at the hospital. The other patients called him *Captain* Whatever is good enough for Captain is good enough for us

And little by little Banting was getting results His "boys" were eating better, were gaining weight Reports from other clinics began to pour into headquarters. Fifty diabetics in advanced stages had been given insulin Ten of them had been carried into the emergency ward in coma. All ten had revived from the coma Forty-six patients were reported improved. Six of them were almost completely recovered. "Fred Banting is moving in the right direction at last"

And in the nick of time to preserve the lives of such men as King George V of England, Hugh Walpole, George Eastman, H. G. Wells and Dr George R Minot. Thanks to the insulin

treatment, Dr Minot was spared to the world for the discovery of an equally great gift of mercy—the liver treatment for the fatal disease of pernicious anemia.

At last Banting received his due recompense—the Nobel Prize for Medicine (1922). This prize was awarded jointly to him and to Professor Macleod. As soon as Banting received the prize money he sent half of it to his assistant, Charlie Best. In the telegram that accompanied the check he wrote: "You are with me in my share—always."

VI

AFTER THE BATTLE OF FLANDERS Fred Banting had received the iron cross for "coolness under fire." He now proved himself equally cool under a different sort of fire—a barrage of distinctions and honors The Canadian Government organized the Banting Research Foundation to carry on his work and granted him an annuity of fifteen hundred pounds. The citizens of Toronto built an institute (1930) in his name King George V created him (1934) a Knight Commander of the Order of the British Empire The Royal Society named him to a Fellowship (1935) for his "outstanding contribution" to the knowledge of diabetes "All I know about diabetes," he remarked, "can be told in about fifteen minutes" He took all his honors with a smile and went modestly on with his work.

He had now extended his work to other fields. He had entered upon a series of experiments on the suprarenal gland and on the causes of cancer. There were so many problems still unexplored How could he rest? "It is not within the power of the properly constituted human mind to be satisfied." Once an answer comes to a question, one must search in its constituents for a new question, for the blessed realm of a new anxiety, where at the journey's end new medals may be won. Not that the medals are worth anything once they are received "'The greatest joy in life is the getting, not the having"—the con-

sciousness of an important job well done. And what if others have taken the credit for your work? This only proves the importance of the work. "It is not the thinker that counts in human progress, but the thought." The thinker dies, but the thought lives on.

When the hours of patient searching were over, Banting took a brush and canvas and tramped over the countryside sketching the scenes before him. For painting was his means of relaxation. And he was clever at it. "Banting is one of Canada's most exciting amateur artists," remarked his colleague, Best. For many years he had apprenticed himself stubbornly to a mastery of landscape painting. It was a labor of love, this recording of his affection for the soil. He liked to paint nature in her winter as well as in her summer moods. He enjoyed tramping over the fields on his snowshoes while the winds whistled in from the gulf and Quebec was a-tingle with the cold. At noon he stopped to build a fire, thawing his hands over his tea and warming his mind with his thoughts And then, when his fingers made contact with the paint, they were alive with power. It was such fun to escape from the stuffy little cubbyhole of his experiments to this laboratory of the outdoors. So good to breathe this peaceful air . . .

And then, a sudden halt to his peaceful experiments and his painting. The autumn of 1939. The second World War had broken out. In an old shabby suit spotted with cigarette ashes he turned up at a hospital base in Ottawa and asked for Colonel Rae, the officer in charge "I'm too old to fight, sir, but I'd like to join up with your medical unit with the lowest ranking you can give me"

They gave him the rank of captain and he protested violently. "I would much prefer to be a private." They raised him to the rank of major and he protested still more violently Finally, when they threatened to raise him to the rank of colonel, he consented to serve as major. "A man can try his best," he said with a resigned smile, "even in an exalted post."

VII

HE WAS FORTY-NINE. In the darkness of the world's autumn, once more a stubborn groping research to combat a malignant disease—an assault on human freedom. He aided in establishing and in classifying reserves of blood to supply transfusions for the troops and the civilians under fire. He took several trips to England as medical liaison officer. He was appointed chairman of a committee organized for the purpose of correlating the medical research work of the Canadian and the British armies.

In February 1941 he took off in a bomber for London—the stubborn capital that was keeping its good right arm flung high in a challenge when the Nazi buccaneers of the air threatened to amputate it.

There was much to be done for her—the stubborn lady London. Fred Banting was on the threshold of a new devotion, a new life of service Now he was high above Newfoundland, headed toward the sea, busy with a special problem. Those young men of the Royal Air Force who took steep drops in dive bombers, was there not a way to keep them from losing their brief moments of consciousness as they pulled out into the higher altitudes again?

His head nodded drowsily He looked down over the silhouetted landscape. It was the motionless face of his mother, concealed in a shroud. But he knew her beauty—he had often transferred to his canvas the shadows of her features and the sunlight in her eyes. "I shall devote much more time to painting when the war ends . . ."

The radio operator rushed over to him. "Orders from the pilot, Sir Frederick. You must bail out at once!"

An outstretched wing of the ship hit an old tree. One of the landing wheels crashed through the frozen ice of a lake. The wreckage of the plane became imbedded in five feet of snow.

The injured pilot stumbled over to the cabin. The radio operator was dead. Banting lay quiet with his eyes wide open and the blood streaming from a gash in his head. The pilot tried to rouse him. His lips moved. With a great effort of the will he began to speak—rapidly, nervously, as if he were at his desk dictating memoranda to his secretary or in the classroom delivering a lecture. The pilot produced a pencil and paper and pretended to take down the notes. But he couldn't make head or tail of them. He knew that this was the effort of a great mind to record its final message—perhaps a new formula for the stamping out of another disease. But the formula would never reach the world. . . .

Night fell and Banting passed for a few hours into a fitful sleep. With the coming of the dawn he awoke, lifted his head and continued to speak. Intermittently he fell asleep, then struggled back to consciousness and kept on dictating his incoherent notes.

The pilot realized that he must get help and get it soon, or Doctor Banting would not live through the day. Feebly he stumbled through a wilderness of rock and bush and ice. The wind blew into his face and stopped his forward progress after a pitiably short advance. His swollen legs were numb with the cold. He turned around and crawled back to the plane. Doctor Banting had somehow freed himself from the wreckage and had struggled into the open, five feet away.

This was the last of his stubborn acts. He was silent now.

EINSTEIN

Important Dates in the Life of
Albert Einstein

1879—March 14, born at Ulm, Germany

1894-1900—Studied in Switzerland.

1901—Appointed examiner of patents at Berne

1905—Published his *Theory of Relativity.*

1905-9—Developed quantum theory

1909—Appointed professor of theoretical physics at University of Zurich.

1913—Became director of the Kaiser Wilhelm Physical Institute in Berlin. Elected a member of the Prussian Academy of Sciences

1921—Elected to the British Royal Society.

1922—Received Nobel Prize in physics.

1925—Received Copley Medal of Royal Society.

1933—Exiled from Germany, he became a life member of the Institute for Advanced Study at Princeton, New Jersey

1935—Received Franklin Institute medal

1939—Wrote a letter to President Roosevelt explaining the potentialities of atomic energy as a military weapon.

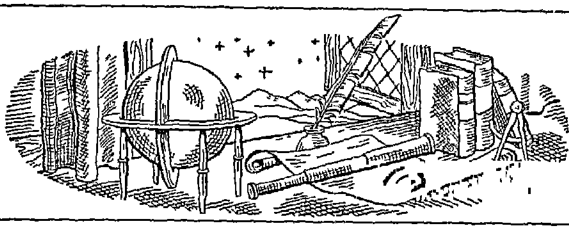
1940—Became an American citizen

1945—Became a pacifist and advocate of world government.

1955—April 18, died at Princeton.

Albert Einstein

1879–1955



ONE day his father brought him a compass It was a small toy to amuse the child Albert trembled with excitement as he gazed upon the "magic" needle turning toward the north. He saw before him not a plaything but a miracle. He was too young to understand the principle of magnetism, yet instinctively he felt that he was standing upon the threshold of an enchanted world.

It was the same way with the little fellow when he played the violin His eyes glistened, and his hand shook far too passionately for a healthy youngster. It was the music that so agitated him. Very often he would stand as if in a trance while his mother played a Mozart or a Beethoven sonata on the piano. But when the talk turned to politics and people spoke of Bismarck and the rise of the German Empire, Albert would grow frightened and leave the room

He was a queer child. Not much like the son of an electrical engineer. One day a regiment of the Kaiser's soldiers marched through the streets of Munich and "all the good Germans" flocked to the windows to cheer. The children especially were fascinated at the sight of the flashing helmets and the arrogant

goose-step of the soldiers. But Albert Einstein shuddered. He despised and feared these "fighting monsters" He begged his mother to take him away to a land where he would never have to become one of them. And his mother, to quiet her son, promised that she would.

A queer child indeed. He had none of the enthusiasms, and little of the mentality, of other children. His father was pained at the reports from Albert's teachers. They told him that the boy was mentally slow, unsociable, "adrift forever in his foolish dreams" They nicknamed him *Pater Langweil—Father Bore.* But Albert was unaware of the anxiety of his elders He felt very keenly alive in a world full of wonder. And he probed into this world all by himself. He needed no other company. He composed songs and set them to words in praise of God. He played in his garden or walked in the streets singing his songs aloud He was incredibly happy.

But soon he was to learn bitter things. At home he had been brought up in the Jewish faith. At the state school he was instructed in the Catholic religion. And the heart of the child found nothing irreconcilable between the Old Testament and the New. They were both beautiful poems, sad and true, these stories about the sufferings of the Prophets and the martyrdom of the Saviour He loved both stories with an equal fervor, just as he loved his compass and his songs But one day the teacher brought into the classroom a large nail. And he told the students that this was the nail with which Jesus had been crucified. And suddenly all eyes were turned upon Albert, as if *he* had crucified Jesus He saw the faces of his fellow students transfixed with a strange kind of hatred. And he couldn't understand it. His face blushing with shame—for the others, not for himself—he rose from his seat and rushed out of the room.

He was alone, save for the companionship of his books. He formed a friendship across the centuries with Euclid, Newton, Spinoza, Descartes—mathematicians and philosophers whose works he had mastered before he was fifteen. And he adored

the poets and the musicians—Heine, Schiller, Goethe, Beethoven, Mozart and Bach. Here was a world of order, of harmony, of law—a logic that reacted as a balm upon a sensitive nature bewildered by the illogic of his teachers and his fellow pupils.

When Albert was in the secondary school he found it more necessary than ever to "drown his solitude in his books." For his father had lost his business and had moved his family to Milan in the hope that the change of scenery might bring back his financial health. Albert was left alone in Munich.

On his vacations, however, he visited Milan and found the Italian atmosphere congenial to his dreaming soul. He renounced his German citizenship. But he didn't apply for Italian papers. He desired to remain unattached—a citizen of the world.

His father was annoyed at his eccentricities. The time had come for Albert to shoulder the responsibilities of a man. He was already sixteen. Herr Einstein urged him to forget his "philosophical nonsense" and to apply himself to the "sensible trade" of electrical engineering.

Albert was desolate. His very instincts rebelled at the idea of his becoming a tradesman. But how could he stand up against the whole world?

He got the answer to this problem one day when he read an essay of Emerson's "If a man plant himself indomitably on his instincts, the world will come round to him."

II

ALBERT'S STUBBORNNESS won out. His father allowed him to specialize in mathematics. He took the entrance examinations for the Zurich Polytechnic Academy—and failed. He was deficient in his knowledge of foreign languages.

Back to the secondary school and his study of syntax. After a brief and intensive application to his prepositions and his participles he presented himself once more as a candidate for the Zurich Polytechnic Academy. This time he was successful.

His plans had now matured. He would prepare himself for a teaching position in mathematics and in physics. Voraciously he read every book he could find on these subjects. But his intellectual appetite had extended to several of the kindred fields in philosophy and in science. He yielded to the spell of Ernst Mach's positivism and of Darwin's evolution. He absorbed the utopian economics of socialism. He admired the methodical pessimism of Schopenhauer and the methodical optimism of Kant. And always, as in childhood, he developed his intellectual dreams within the framework of his passion for music. He visited the Music Hall and listened to the magic of Joachim's violin. And then he retired to his lodging and improvised on his own violin until late into the night.

And thus he finished his studies and received his teacher's certificate. But he received no teacher's appointment. He was a Jew. Wherever he applied for a position, he was met with the same evasive answer: "Personally I have no objection; but there are others, you see . . ."

For a while he resorted—unsuccessfully—to private tutoring, and then he got a clerical job at the Swiss patent office in Berne. Hour after hour he bent over his desk adding his figures and dreaming of the stars. In his spare moments he covered his note paper with complicated mathematical formulas. But when he heard the footsteps of his employer, he threw the paper into the basket. Dr Halle, kindly as he was, had no sympathy for the "speculative nonsense" of his young employee.

But to Einstein these studies of his spare moments were anything but speculative. His abstract formulas—one of them held within it the secret of the atomic bomb—had taken on the texture of reality He had found, he believed, a new key to the riddle of the universe. But he confided this belief to only a few of his intimates—and to Mileva Maric, his Serbian schoolmate whom he had made his wife. "I have been trying to solve the problem of space and time."

When he finished what he regarded as the correct solution to

the problem, he brought it into the office of the *Annalen der Physik*. "I would be happy," he said timidly to the editor, "if you could find the room to publish this in your paper."

The editor found the room, and the obscure clerk of the Swiss patent office became one of the most famous scientists in the world.

III

EINSTEIN was twenty-six when he solved the problem of celestial harmony. It was the solution of the artist as well as of the scientist. He had tried to analyze the pattern of the stars just as the musician analyzes the pattern of the sonata How are the parts interrelated in order to produce the concordance of the whole?

All the earlier attempts to solve the structure of the universe, observed Einstein, had been based upon a false assumption. The scientists had supposed that whatever seemed true to *them,* looking out upon the universe from their *own* point of view, from their *own* relative position in their *own* little corner of the world, must necessarily be true for *everybody else,* looking out upon the universe from *every other* point of view. But actually—asserted Einstein—there is no such absolute truth. The same landscape presents different faces to different people looking upon it from different vantage points. It is one thing to the pedestrian, quite another thing to the motorist, and still another thing to the aviator. Every experience is *relative* to the person who undergoes that particular experience. The only objective reality in the universe is that which constitutes *a combination of every possible point of experience.* Absolute truth can be ascertained only through the sum total of all relative observations. This is but a mathematical way of restating the Spinozist doctrine that the Mind of God is the combination of all human minds encompassed within the framework of eternity—*sub specie aeternitatis.* Einstein was a thoroughgoing disciple of Spinoza.

But not of Newton. Contrary to the doctrine of Newton that everything tends naturally to remain at rest, Einstein declared that everything is actually in a state of motion But the velocities of the various moving bodies of the universe, he explained, are relative to one another. To this relativity of motion, however, there is one exception—the constant velocity of light. This velocity—about 186,000 miles a second—is the maximum speed that we know. It is the one unchanging factor in all our equations about the relative speed of moving bodies

The law of relativity, declared Einstein, applies not only to the *speed* but also to the *direction* of a moving body. Suppose we drop a stone from a tower to the ground. To us the stone will appear to fall in a straight line. To a theoretical observer in space—to Einstein an "observer" meant either a person or a recording instrument—the stone would describe a curved line, inasmuch as this observer would record not only the motion of the stone upon our planet but also the motion of our planet around its axis To still another observer, stationed not in empty space but on another planet, subject to a different motion from that of our own planet, the falling stone would describe still another path. All the paths, or directions, of a moving object are therefore relative to the various vantage points from which the movements of the object are observed.

And so we find that both the *speed* and the *direction* of a moving body are relative. But this, continues Einstein, is not yet the whole story. There is a third factor in relativity—the relative *size* of a moving body. All bodies contract in motion. To an observer sitting inside a rapidly moving train the train is longer than it is to another observer who watches it from the outside. The rate of the contraction of a moving object increases with its increasing speed. A stick measuring a yard in a state of so-called rest would shrink to zero if it were set in motion at the speed of light.

Space, then, is relative. So, *too*—declares Einstein—is time. The past, the present and the future are merely three points in

time analogous to the three points in space occupied by—let us say—Washington, New York and Boston. Scientifically speaking, it is just as logical to travel from tomorrow to yesterday as it is to travel from Boston to Washington. To an impartial observer of the universe all time, like all space, would be present in a single glance.

Time, like space, is a matter of relative motion. If a man could attain a speed greater than the speed of light—which of course is humanly impossible—he would overtake his past and leave the date of his birth in the future He would see effects before their causes and he would see events before they actually occurred. Time is merely a planetary clock that measures motion. Each moving planet has its own system of local time which differs from all other time systems. The time system of the earth, far from being an absolute measurement for time everywhere, is nothing but a local schedule of the earth's rotation around the sun. A day is a measurement of motion through space. Our own point in time depends wholly upon our own position in space. The light which brings us the image of a distant star may have traveled through space for a million years before it reached the earth. Hence the star that we see today is the star of a million years ago Similarly an event that took place upon the earth thousands of years ago—like the Battle of Marathon—may have just reached the eyes of an observer on another planet who consequently looks upon this event as an episode of today.

Today upon this planet, therefore, may be yesterday upon another planet and tomorrow upon a third planet. For time is a dimension of space—and space is a dimension of time Actually—asserts Einstein—the universe consists of a space-time continuity; both space and time are dependent upon each other. Neither can be expressed independently. Both must be considered as coordinate aspects of motion in our mathematical approach to reality. The world is not three-dimensional. It consists of the three dimensions of space and of an additional fourth dimension—time.

IV

EINSTEIN was amused at the flurry of attention that he received for his "superior" wisdom. "Before God we are all equally wise, equally foolish," he said. He wasn't the least bit excited when he received the offer of a professorship at Zurich Professors had always bored him He was an artist. He had no use for the pedantic type of mind. "Pedants collect their facts as dogs collect their bones—only to hoard them in the dust." Few of the so-called scholars, he had noticed, understood the meaning of speculative thought. Hardly any of them were dreamers. They laughed when you told them that it is possible for the scientist to search for the secret of physical laws just as passionately as the composer searches for the secret of musical harmony. "The great scientist and the great composer are alike in one respect—both of them are great poets."

It was as a poet that Einstein greeted the arrival of his first child. He took far greater joy in wheeling the baby carriage than in delivering his lectures at the university. He trembled before the vacuous eyes and the gaping mouths of the audiences who had come to purchase a penny's worth of knowledge at the fountain of his wisdom. He was not a man to lead crowds or to teach crowds or to mingle in crowds. He was a solitary student, "a singular, taciturn, lonely seeker." It mattered little to him that he had built up a solid reputation amongst the learned societies of Europe, that the distinguished mathematician, Poincaré, had greeted him as the "conqueror of Newton" and that the eminent physicist, Lorentz, had acknowledged him as one of the foremost scientists of history. It was unessential that the famous universities of Utrecht and of Leyden had offered him professorships He looked back regretfully upon the old days when he had served as a clerk under Dr Halle—a position in which he had found the time and the quiet to carry on his re-

searches without ceremony, without ostentation, without banquets.

He finally accepted the position of *professor ordinarius* at the University of Berlin. For his family must live somehow. During his walks through the streets of the Prussian capital he continued to build upon his theory of relativity. His early speculations had led to a great number of interesting conclusions But they had given rise to an equally great number of further questions. A "demoniacal curiosity" had taken possession of him to seek out the final lair of truth—the underlying cadence in the movement of the stars through the symphony of time and space. More and more in his moments of relaxation he turned to his violin and improvised new themes that gave wing to his speculative thoughts.

But there was a sudden interruption to these thoughts. Europe had exploded into war (1914). The sensitive soul of Einstein recoiled in dismay "This war is a vicious and savage crime. I would rather be hacked to pieces than take part in such an abominable business."

But few people now listened to him Creative thought had no place in a world bent upon destruction It was all a matter of relative values . . .

Throughout the conflict Einstein lived in a cosmos of his own creation Shutting himself up in a shabby little attic away from the other rooms in a Berlin apartment house, he set to work verifying and elaborating upon the essential principles of his theory of relativity. The slightest domestic episode was enough to start him off on a significant train of thought. Once he climbed a ladder to change a picture on the wall. But absent-mindedly he forgot the business at hand, lost his footing and landed on the floor. When he got to his feet he commenced to speculate on the causes of the upset. The fall of the ladder in Einstein's attic was destined to play no less important a role in science than the fall of the apple in Newton's garden. For it led Einstein to undertake a critical analysis of the theory of gravitation.

Once more, as in the analysis of motion and space and time, he arrived at startling conclusions. The physicists, he declared, had been fundamentally wrong in their belief that objects *fell,* in the sense that they were *pulled down* to a center of gravitation Scientifically speaking, no object is ever pulled down. Indeed, there is no such thing as "down"—or "up"—in the universe. "The motion of a body is due solely to the tendency of matter to follow the path of least resistance." Bodies in their travels through space select the easiest paths and avoid the most difficult There is no more reason to assume an absolute gravitational force through space than to assume an absolute dimension of time. Just as there are local schedules of time, so too there are local fields of gravitation But these fields have no mysterious force or pull. Every mass—like the sun, for example—creates at its center a curving or "warping" of the neighboring space into a "hill" And the masses in the vicinity of that hill—like the earth and the other planets of the solar system—move around the slopes of that hill for the simple reason that this is the easiest way for them to move. Einstein proved this "curvature" theory of space by means of a series of mathematical formulas The significant point of the theory is this· The shortest distance between two points is not a *straight* line, but a *curved* line, since the universe consists of a series of curved hills and all objects in this universe travel around the curved slopes of these hills. Indeed, in this universe of ours there is no such thing as motion in a straight line A ray of light traveling toward the earth from a distant star is deflected, or turned aside, when it passes the hill-slope of space around the sun. Einstein figured out mathematically the exact degree of this deflection.

And his figure proved to be correct. At the eclipse of 1919 the observatories of Cambridge and of Greenwich, each acting independently of the other, sent out an expedition of astronomers to photograph the direction of the starlight during the eclipse. Both groups found that their photographs corroborated the prediction of Einstein almost to the exact decimal point which he

had figured out in his mathematical formulas. The ray of light *did* curve in the manner and the degree as described in the calculations of Einstein. A new conception of the universe had been born in the human mind.

When Einstein received the photographs of the astronomers he looked at them with a cynical twinkle in his eye "Now that my theory of relativity has been proved true," he chuckled, "Germany will claim me as a German and France will declare that I am a citizen of the world. Had my theory proved false, France would have said that I am a German and Germany would have declared that I am a Jew."

V

No ONE was more surprised at the sudden deluge of fame that descended upon Einstein than the scientist himself. Like Byron he awoke one day to find his name on everybody's lips Not only learned men of science but millions of common people throughout the world had adopted him as a household idol. The results of the astronomers' expedition had been telegraphed to all the newspapers He was kept busy posing for photographs, submitting to interviews, turning down offers from Hollywood—including one invitation to make a film at forty thousand dollars a week. In his bewilderment he turned to his wife "This won't last. It *can't* last People have gone temporarily crazy and tomorrow they will forget all about it." Fame was the last thing he desired As his notoriety kept increasing from month to month he became frankly annoyed. He had hoped to spend his entire life in quiet research. And now he couldn't hear his own thoughts for the noisy acclamation. What did people want with him? Why would they not permit him to live like anyone else? What barbarous nonsense was all this? "Everybody talks about me, and nobody understands me."

Indeed, nobody even *cared* to understand this amazing

juggler of mathematical ideas. One evening a young lady introduced her fiancé to the pastor of her church The following day the pastor met the bride-to-be and took her aside. "I approve of your young man in every respect save one," he told her. "He lacks a sense of humor. I asked him to explain to me Einstein's theory of relativity and he actually tried to do it."

Einstein's popularity had risen to appalling heights. He couldn't take his daily walk in the streets without being surrounded by photographers, reporters and autograph hunters. Every day baskets of mail arrived at the little Berlin apartment. Famous statesmen, obscure pacifists, unemployed workmen, lovelorn ladies—everybody wrote to him. The supreme irony had settled upon him. "I have become a demigod in spite of myself." A young devotee volunteered to be his disciple in "cosmic meditation." An inventor confided to him his plans for a new flying machine. A would-be explorer asked his advice on a trip to the Asiatic jungles An actor begged him to become his manager. A cigar manufacturer announced that he had produced a new brand of cigars and named it *Relativity*.

"The public looks upon me as a strange new animal in the circus of the world" He smiled. And he tried to go on with his work in his quiet, modest way When he was invited to speak to a distinguished group of scientists at Oslo, he pulled out a shabby dinner jacket and brushed it carefully. "If anyone thinks I am not dressed elegantly enough," he told his wife, "I'll put a tag on this coat with the notice that it has just been brushed." He arrived for another of his lectures—at the University of Berlin—in a homely pair of sport knickers and sandals. He walked about the streets of Berlin wrapped in an old sweater and in new dreams. Let the circus-minded public gossip and glare. He would be just simply himself.

His simplicity was no theatrical pose on his part Once the queen of Belgium invited him to pay her a visit. Never suspecting that a reception committee of state dignitaries would await him at the station in their limousine, he alighted from the train

with a suitcase in one hand and a violin in the other and started on foot for the palace.

In vain the dignitaries looked for him at the station. Finally they returned to the queen with the announcement that Einstein had apparently changed his mind about coming. And then they espied the dusty figure of a little gray-haired man tramping up the road.

"Why didn't you use the car I sent for you, Herr Doktor?" asked the queen.

Her guest looked at her with a naive smile. "It was a very pleasant walk, Your Majesty."

He asked for no limousines in his journey through life. All he wanted was just "a very pleasant walk." He was disturbed when the crowds lined the way and cluttered up the landscape of his thoughts. They made such unreasonable demands upon him. When the editor of a successful American magazine offered him a staggering fee for an article on any subject that he might care to discuss, tears of rage sprang into his eyes. "Does the impudent fellow think I am a movie star?" he cried to his wife.

He hated wealth. He would have none of it "I am absolutely convinced that no wealth in the world can help humanity forward." What the world wanted most, he said, could never be bought with money. "The world has been ravaged by war. The old hatreds are festering. The world needs permanent peace and lasting good will."

When the war was over, he tried to establish his dream of world peace upon a basis of reality. He undertook a series of "reconciliation lectures" in the "enemy" countries At a time when it was dangerous to speak German in the streets of Paris the scientist in a gentle voice explained his cosmic philosophy and won the entire audience back to a sympathy for his German countrymen When he stood on a London platform the quiet hostility with which the audience first greeted him as a German melted into tolerance and swelled finally to loud acclaim. The universality of his thinking made people ashamed of their puny

provincialism. He showed them the design of an interstellar harmony. And he foretold that some day there would be a similar harmonious design among the nations on the earth.

He met Aristide Briand, the French premier, and discussed with him the necessity of a Franco-German pact to end hatred. He accepted a post as the German representative of the League of Nations committee for intellectual cooperation, and he discussed with Henri Bergson the architecture of the "New Republic of Decency" that the men of good will were bent upon raising throughout the world. "It is plain that we exist for our fellow men—in the first place for those upon whose smiles and welfare all our happiness depends, and next for all those unknown to us personally but to whose destinies we are bound by the tie of sympathy "

Others were not so convinced of his credo. He barely escaped assassination at the hands of a Russian noblewoman who harbored imperialistic ambitions. All over the world the gentle scientist who had desired nothing more than an opportunity for his private studies—unless it be public justice for his fellow men—became a target for political abuse Cries were raised against him on the grounds of his racial origin. Antisemitism had caught post-war Germany in full tide. He was aghast at the savage intolerance of his German countrymen, but he felt convinced that under the right kind of leadership they might yet return to the sanity of their old time cultural and moral standards. When he found his name high on the black list of the German right-wing assassins he crossed over to the refuge of Holland.

But he encountered the ferment of unrest even in that tolerant country Indeed everywhere in the world humanity seemed to be beating a hasty retreat to barbarism. People had lost their sense of proportion. The Mark Twain Society offered him the position of honorary vice-president. But when he learned that this society had offered a similar post to Benito Mussolini, Einstein flatly rejected the dishonor

He went on a journey to the Orient. In India he was shocked

to see millions of men living in slave labor and transporting their fellow men literally upon their backs He refused to become a party to such human degradation. He never rode in a rickshaw throughout his entire trip. He went to China and saw men and women and children groaning aloud at their work in the cotton mills He visited Japan and discounted the ceremonious treatment he received at the hands of the grownups. Instead, he turned to the Japanese children. He accepted from them scrapbooks of their drawings. And he listened with joy to their talk. "In the children lies the hope of the world." They must never be brought up to hate. They must never abuse the hard-won achievements of the human race "Let us hope," he told his little friends, "that your generation will put mine to shame."

VI

THE wandering philosopher-minstrel, with his mathematical formulas and his violin, traveled on to Palestine and Spain and Latin America Finally he arrived in the United States And here at last he found a land where human beings of all classes lived together in tolerable friendship

One day in November 1932, while Einstein was talking to a group of scientists on the Pacific Coast, a winter storm broke with fury in Berlin. Adolf Hitler took over the affairs of the German people.

The German Government, hoping to receive the indorsement of the "world-builder" for the Nazi regime, begged Einstein to return. Hitler would "overlook the fact that he was a Jew." But Einstein refused. And so Hitler put a price of twenty thousand marks upon his head A band of storm troopers broke into his summer home at Caputh on the charge that he had concealed a quantity of arms and ammunition with which to overturn the government. They found in the "arsenal" nothing that resembled "arms" except an old bread knife grown rusty with disuse.

Hounded from his native land—the Nazis had received his resignation from the University of Berlin "without regret"—he was appointed (1933) a life member of the Institute for Advanced Study at Princeton, New Jersey. Here he hoped to go on, peacefully and quietly, with his old academic curriculum of human friendships and cosmic dreams. He served in his post of theoretical physics from 1933 to 1945, following which he resigned, retaining the title of professor emeritus.

During these years, however, Albert Einstein was again called from his quiet studies In October of 1939, he signed a letter to President Roosevelt, at the instigation of his fellow scientists, explaining the potentialities of atomic energy as a military force. Following the destruction of Hiroshima in 1945, however, he became a militant advocate of world government as the only practical method for attaining international peace

In 1955, at the age of seventy-six, Albert Einstein died, leaving behind him the memory of a man who gazed upon the universe with the dispassion of a scientist and upon mankind with the compassion of a saint.